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TWENTY-FIRST

ANNUAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

PUBLIC MUSEUM



OF THE

CITY OF MILWAUKEE

SEPTEMBER 1, 1902 TO AUGUST 31, 1903.

OCTOBER 1, 1903.

MILWAUKEE:
THE EDW. KEOGH PRESS, 347-349 BROADWAY.
1903.

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Fred. Grossenbach, - - -	Term expires May, 1906
Ferdinand Meinecke, - - -	Term expires May, 1905
Robert Nunnemacher, - - -	Term expires May, 1904

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C. J. Fitzgerald, - - - -	Term expires May, 1904
T. J. Pringle, - - - -	Term expires May, 1904

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Jeremiah Quin, Pres't of School Board,	Term expires May, 1904

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Carl Hagenbeck, Hamburg, Germany,	Zoölogy
Albert von Hoffmann,	Archaeology
Adolph Meinecke,	At Large
Chas. E. Monroe,	Palaeontology
August Stirn,	Ornithology

MUSEUM SERVICE

Henry L. Ward,	Custodian and Secretary
Carl Thal,	Ass't Custodian and Ass't Secretary
Wm. B. Brickner,	Special Clerk
Charles Brandler,	Taxidermist
Geo. Shrosbree,	Taxidermist
Paul C. Rohde,	Taxidermist Apprentice
Herbert Clowes,	Landscape Modeler
Chas. E. Brown,	Attendant
Henry E. Eichfeld,	Attendant
Lydia Nehrling,	Attendant
Olive C. Wheeler,	Attendant
Phillip J. Pier,	Janitor
Clare F. Wilson,	Chief Engineer

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REPORT OF THE PRESIDENT

MILWAUKEE, September 22, 1903.

To the Honorable the Common Council of the City of Milwaukee:

GENTLEMEN—As required by Section 8 of Chapter 328 of the Laws of Wisconsin of 1882, the Board of Trustees of the Public Museum of the City of Milwaukee herewith presents its twenty-first annual report.

Attached to this report is the inventory of the museum and a statement of its financial transactions from September 1st, 1902, to August 31st, 1903.

As to the patronization of the museum by the public, I feel only too gratified to say that it is beyond expectation.

The policy of the Custodian to excel in the preparation and exhibition of mammal and bird groups, by which the animals are shown to the visitors in their homes with all the natural surroundings, has found the greatest admiration on the part of the public.

The practice of the School Board of having the teachers bring their classes to the museum has been continued with good success, and the Custodian in conjunction with the Board of Trustees has done everything in their power to encourage attendance of this kind.

The museum is growing rapidly, the space given to the exhibition of objects has nearly all been occupied and there is but very little room left for installing new exhibition cases. In my previous reports I have already drawn the attention of your honorable body to the urgent necessity of having another wing erected, for which there is sufficient vacant space on the

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north side of the present building, in order to enable the Museum Board to make additional exhibits such as are contemplated by the Board of Trustees.

The museum with its present rapid growth is considerably hampered by an insufficient appropriation which made itself manifest for several years much to the disadvantage of the institution. It will for this reason be indispensable for this Board to petition the next State Legislature for such an increase in the museum's appropriation as will be adequate to the progress that we are expecting to make in the near future. In the endeavor to secure such an increase in our appropriation, the Board of Trustees kindly solicits the co-operation of the honorable the Common Council of this city, with the assurance that everything will be done by the Board of Trustees to heighten the reputation of the Milwaukee Public Museum, and have it placed in the front rank with similar institutions in the United States.

The inventory of the museum shows a considerable increase over that of last year and is as follows:

6,486	Mineralogical and geological specimens, valued at	$7,151 80
14,623	Palaeontological specimens, valued at	7,190 05
22,859	Botanical specimens, valued at	1,604 65
163,043	Zoölogical specimens, valued at	58,633 55
19,025	Archaeological specimens, valued at	11,710 15
3,959	Ethnological specimens, valued at	12,996 60
2,651	Arms, armor, carvings and other objects contained in the Rud. J. Nunnemacher collection, valued at	72,329 59
2,244	Coins, banknotes, medals, etc., valued at	454 52
10,382	Books, pamphlets, maps, etc., valued at	9,929 20
	Furniture, tools, jars, vessels, etc., valued at	51,238 55
245,272	Total	$233,238 66

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The financial statement of the Board is as follows:

Balance in Museum fund Sept. 1, 1902	$10,846 91
Refunded from various sources	546 94
Appropriation to Museum fund, Jan. 1, 1903	24,554 48
	$35,948 33
Total expenditures during the year	25,845 89
Leaving a balance on Sept. 1, 1903 of	$10,102 44

For more detailed information you are referred to the Custodian's report.

In conclusion I wish to express my thanks to the members of the Board of Trustees for their kind co-operation in the museum work, and for their valuable time which they have so cheerfully given to further the best interests of the museum.

All of which is respectfully submitted.

E. W. WINDFELDER,
President.

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REPORT OF THE CUSTODIAN

GENTLEMEN—This, the twenty-first annual report of the museum, is herewith submitted to you in accordance with the provisions of Section 12 of Rule 6 governing the museum, and will, I trust, show a satisfactory advance along the lines broadly indicated at the inception of this institution as an independent municipal department twenty-one years ago.

It would afford me much pleasure to be able to chronicle the securing of a professionally trained corps of curators for the various departments of the museum, whose assistance will be absolutely essential in the development of the scientific side of various of the collections commensurate with the dignity that their extent seems to warrant: but the lack of an adequate income has as yet rendered this impracticable. The absence of such assistants with its concomitant result reflected in the exhibitions must be unsatisfactory to you and probably also is to the more discriminating portion of our visitors. This desideratum as well as that of increased space in which to rearrange and expand the collections are matters that undoubtedly will be remedied by you as soon as possible; after which we may hope to put the collections in such shape that their educational features may readily be grasped by the casual visitor and the institution become recognized as one of the most important and influential educational factors in the city. It has thus far done but a small proportion of the educational work that under slightly better financial conditions might be expected of it.

The museum building should contain an auditorium or amphitheater in which the professionalized staff and invited

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speakers would each year give courses of popular illustrated lectures on subjects that would create and maintain a more appreciative and lively interest in the museum than now exists in the minds of most of our visitors. Lectures designed primarily for the school teachers, in order that they might more effectively use the various collections prepared for loaning to the schools, would not seriously interfere with the museum work of a competent staff and would surely be of much benefit to the teachers and to others who would probably attend; and would greatly increase the influence of the museum upon the school children of our city. At the present time the Board room is frequently used by the various scientific societies, but as it was designed as a meeting room for only about a dozen people provision was not made for the rapid changing of air required by a large assemblage. The Wisconsin Natural History Society and its various sections, the Wisconsin Archaeological Society, the Wisconsin Mycological Society and the Milwaukee County Medical Society hold their sessions in this room. Various times its seating capacity has been taxed to the utmost; and at such times the atmospheric conditions have been almost unendurable. Should you approve of this scheme of popular lectures it would be well to bear the matter in mind when adding to the present building. I have given this matter careful consideration and am convinced of its desirability and feasibility. In the American Museum of Natural History in New York City the state is annually paying into the museum treasury the sum of twelve thousand dollars to enable it to carry on its system of public instruction which reaches all over the state of New York in the form of printed lectures and lantern slides for illustrating them, while at the museum lectures for the teachers of the city have long been furnished. Last year ninety lectures were given in their large auditorium which was insufficient to accommodate all who wished to attend. Similar courses of lectures, some larger and some smaller, are carried on by

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nearly all the museums in the country and are considered one of their important features. The leading museum men of the world have almost universally recognized the importance and value to their museums of such lectures. We find them at our own National Museum, while it was a matter of oft expressed regret to Sir Richard Owen that he could not induce the trustees of the British Museum, Department of Natural History, to provide for a lecture hall in that building. I feel sure that the citizens of Milwaukee, with their high degree of culture and intelligence, would heartily appreciate such efforts on their behalf.

There are several good collections in the museum which are at present in a fairly satisfactory condition for advanced students, but which mean very little to the unscientific visitor because of the lack of explanatory labels and these consequently are somewhat generally looked upon, and probably justly from the point of view of the ordinary visitor, as aggregates of "curios." My desire is to have such collections not only scientifically arranged but so illumined by carefully worded labels, diagrams, pictures, etc., as to make them of interest to one devoid of technical knowledge; to attract the casual observer and instruct him unawares. Some of this work we have been carrying out the past year as best we could under existing conditions, but progress in it has been much slower than desirable; and to so treat various other of our collections is quite beyond the capabilities of the present staff; yet these collections are worthy of proper presentation and much good might be done our local students were they elaborated as they deserve.

During the past twelve months we have made several important additions to the museum and have re-labeled and rearranged various collections which are specifically mentioned in the following paragraphs. Much still remains to be done in this latter line, upon which so greatly depends the usefulness of the institution to students.

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Our inventories are now in good condition with the exception of that of the Insects, which requires considerable work, and a portion of the Botanical one waiting on the remounting and identification of some specimens, mostly foreign. This work, and during the last few months work upon the card catalogue of the library, has occupied such of the time of Mr. Thal as has not been taken up with the administration of the museum during my absence and the keeping of the museum accounts and various other duties that have devolved upon him.

The cataloging of a library of over ten thousand volumes, so as to make the contents easily available for our work, is a matter of considerable magnitude. During the year the library has been augmented by considerably over one thousand volumes, some of which necessitate a large number of cards to index their varied contents. Approximately thirteen thousand of these have now been written; but it is probable that considerable time will elapse before the library is in good working order. The accessioning of the various books and pamphlets as they come in, besides the stenographic and clerical duties of the office, has been attended to by Mr. Brickner. During this year we have found it advisable to add more than formerly to the library by purchase in order to obtain books essential to carrying on the museum work. It is still very weak in many directions and it will be found necessary to purchase more extensively in the future to provide the tools requisite for the elucidation of the growing collections.

We now have three reading tables in operation. One in the Mammal hall on the first floor, bearing three books on mammals which are chained to a standard in the center of the table; another on the second floor, by the collection of local birds, having five books treating of the birds of this region, which are fastened by tape; and one on the third floor near the minerals with as yet but a single book. It seems essential

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ESKIMO FISHING GIRL.

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that the books be fastened in some manner to obviate visitors carrying them about and not returning them to their proper places. Should any one desire to purloin a book it is patent that a chain fastening would present the greater obstacle, but its suggestion seems to be unfortunate, and I think that in the future we had best employ the lighter and less secure tape which serves only as a suggestion that the book should not be removed. I am pleased to state that these books are used considerably and are treated carefully. They certainly are conducive to a better appreciation of the museum and are provocative of that study and research which we should assist. It will be advisable to add other reading tables from time to time until we have all the principal collections supplemented in this manner.

In the entrance lobby on the ground floor we have installed an attractive scenic case representing an Eskimo girl fishing through the ice of a pool in a rock-bound stream bordered by wooded hills. This, because of its beauty and human interest, attracts attention and favorable comment from all and is particularly a favorite with the ladies and children. The design of the case, which is unique in museum furniture, as well as the conception and execution of the figure and scenery, is the work of F. B. Melville of Chicago, the well known modeler of ethnological groups. The case is rectangular, 7 feet front, 6 feet deep and 9 feet in height, and conforms to our others in being of cherry stained to mahogany. The only opening is a curtained window, 4 x 3½ feet, (flanked by two heavy pillars) that gives a view of the interior suggestive of looking through a window of an observation car upon a passing scene. Light is furnished by hidden and tempered electric lights contained in holophane globes within the case, giving an ample yet subdued and diffused light. The back, one end and the top of the interior are domed. The other end is a mirror that reflects and multiplies parts of the scene, while the balance is shut off by a screen of trees painted directly upon the mirror

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itself. In this manner is overcome the obvious unreality produced by directly joining a mirror at right angles to a painted background, and most beholders are unconscious that one is present. The scene is somewhat theatrical and panoramic in its make up, but certainly is highly effective; much more so than could be obtained with the ordinary museum case. In the interior lighting of this group, as well as of several others previously so treated, we are greatly indebted to Engineer Wilson who has taken much interest in the grave matter of effective museum lighting.

In the Mammal hall considerable advance has been made during the year and other work is under way which will materially enhance the scientific value and general appearance of this room. Mr. Brandler has executed a group of African asses upon the desert, of musk oxen with Arctic surroundings, a winter group of weasels and the specimens of a summer group of the same animal, and also of a group of mink, the accessories and painted background of which were prepared by Mr. Clowes. These companion groups of weasels are designed to show the protective coloration of this animal in our latitude both in summer and in winter and form part of the series of groups of Wisconsin mammals that we hope will fill the series of quadruple cases at the south end of the mammal room. Mr. Brandler has also mounted various single specimens of mammals. A mounted specimen of a large sea elephant was purchased. The groups of orang-outangs and American bison, that have hitherto remained in the unfinished condition in which they were installed when the collections were moved into the present building have been rearranged, and suitable accessories added by Mr. Clowes, so that they now present a very natural appearance and exhibit more of the life histories of these animals.

Comparing the groups of musk oxen, bison and orang-outangs with those exhibited in other museums in the country, I feel that we have made a very creditable showing and are

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GROUP OF SABLES OR PINE MARTENS.

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running equal with the best. In the case of the orangs I am convinced that no other group in the United States equals ours either in general appearance or in scientific accuracy and elaborateness of accessories. It is doubtful if the durion trees, commonly represented in these groups, in any other museum approximate as closely in bark texture as ours, or if the leaves in any other group are made in molds taken from the living leaf. The orchids, modeled from a living plant collected in Borneo, lend a pleasing touch of color. The groups are provided with framed descriptive labels telling something of the habits of the animals shown.

Such groups offer an opportunity to portray a chapter from the lives of the animals shown; to exhibit their methods of hunting and the food that they seek, their homes in which the young may be shown, the kind of country that they inhabit; in fact a great many things that can not be shown by single specimens mounted upon wooden pedestals. It is needless to say that the public are more interested in our groups than in the individual specimens and that they are vastly superior to the latter for a popular educational museum such as this. Much more time is required in the preparation of such groups than would suffice for the mounting of an equal number of single specimens and the space required to exhibit the group considerably exceeds that required for the single specimens; but notwithstanding these drawbacks I think that the superiority of group work greatly exceeds its disadvantages and that it will be expedient for us to continue along this line, at least until we have exhibited in this manner the more important mammals of this section.

On one of the walls of this room, not far removed from the skeleton of the hump-backed whale, has been installed a set of "whaling irons" of the old type. In order to make the use of these more easily understood we have added not only a descriptive label but three carefully prepared water color sketches, by Miss Wheeler, showing the harpooning, lancing,

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and "cutting in" of a whale. By this means an exhibit, which otherwise would be quite insignificant in appearance, is made attractive.

Much, however, is still requisite to give a proper exposition of the mammals of even this state, not to mention North America, and special efforts must be made along this line avoiding scattering our efforts by dabbling in foreign specimens that are of types already represented or which can be satisfactorily shown by specimens from our own region. With limited resources of capital and room it is obvious that excellence can only be obtained by concentrating our efforts. The anthropoid apes, the lion, tiger, giraffe, rhinoceros, etc., are typical mammals that our visitors should be given a chance to see in the museum because so commonly mentioned in literature, though the facility with which all may see living specimens of these rather lessens the necessity for our expending time, money and space for them; but the securing of foreign mammals, whose common names even are quite unknown to all except the zoölogist, and whose types are already shown in the collection, (when we probably have less than a quarter of the mammals indigenous to Wisconsin represented), is a diversion of effort that we can not afford to make and which I trust is a thing of the past. We have had to remove a few mammals because of lack of case room to exhibit them. We have met with some difficulty in procuring desirable skins of North American mammals as the unusual interest now being taken in them has produced a lively demand from museums in all parts of the country.

In the department of birds we have also improved conditions quite materially. The largest single addition has been a series of local birds that are known to occur within twenty-five miles of the city. The preparation of a reliable list based upon specimens collected or observed by credible ornithologists and the preparing of the necessary data that includes the observed dates at which the migratory species arrive and

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GROUP OF MUSK-OXEN.

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leave us, the geographical range of each species, the character of country that it frequents within our region, its food (mainly from records of stomach examinations) and a description of the nest, its situation and the usual number of eggs deposited for such as breed within the limits of the region selected, all the above data which necessitated the finding, examination and tabulating of various lists of local observers, the careful consultation of many books, the search of the museum records and observations of our taxidermists and myself, was a work that occupied all the time that I could spare for it during many months. My list as now constituted shows 293 species recorded from this locality. Of these we have omitted those that rarely visit this locality, partly because of lack of room and partly because less important to show, and a few like swans and geese that were too bulky for the cases at our disposal. The latter are represented in this collection by labels only, the student being referred to the North American collection for the birds themselves. Some few of these birds were culled from the duplicates exhibited in the North American collection, the rest were mounted by Mr. Shrosbree. The collection now occupies three wall cases, in the first of which are shown (a) the permanent residents and (b) species that are mainly migratory but some individuals of which may be found at any time of the year. In the second case are shown those species that are present during the month of the exhibit. At the times of the great spring and fall migrations the case is changed on the 1st and 15th of the month; at other seasons changes are made only once a month. In the third case are shown those birds that at the time are either north or south of us, indicating which. Accompanying the collection is a map of the region, neatly prepared by Mr. Brown, and a reading table with books treating of the birds of the eastern United States. The information given upon the individual labels is more than we have ever seen given elsewhere; but by a judicious selection of various types the more important portions are brought out

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clearly and even the least important can be readily read by those who care for it. In regard to the amount of information conveyed, it is believed that this collection is the most elaborate of its kind in the country. In it we have used polished mahoganized pedestals, such as will eventually supplant those now in use in the North American and foreign series. It has been a source of gratification to observe the number of people who have made use of this collection for the purpose of identifying birds that they have seen and to familiarize themselves with others that they hope to discover.

The large ostrich group has been rearranged by Mr. Shrosbree, who has put in new ground work and added three young ostriches and several eggs, some of which are entire while others have been broken by the escaping young. A number of labels for both the North American and foreign series of birds have been printed by Miss Nehrling. Various birds for the school loan collection have been prepared by Messrs. Shrosbree and Rohde.

Two groups of cedarbirds were mounted by Mr. Shrosbree which Mr. Clowes has provided with natural accessories and painted backgrounds, one representing a summer scene, the other a winter scene. The intention of these two groups is to show that some birds do not alter their appearance with the seasons of the year, a fact that might be overlooked by many casual visitors, who viewing groups exhibiting seasonal changes of plumage would consider such to be the universal habit of birds. He has also made some material improvements in the attitudes of the specimens comprising the group of European flamingoes, and Mr. Clowes has made new accessories and background and the group has been removed to a case on the second floor where it properly belongs. Notwithstanding that this group had some years ago been materially modified there yet remained certain anatomical impossibilities in the positions of the birds. We believe that it is now correct. Several small groups showing the nests and young of local

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SUMMER GROUP OF CEDARBIRDS.

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birds and a number of specimens for the North American collection have also been mounted by Mr. Shrosbree. An attractive group of Bonaparte's gulls upon and about a large rock in the water has been prepared by Mr. Brandler.

We were fortunate in acquiring by purchase a collection of 991 choice skins of North American birds. Of these, 279 species and over 400 specimens were desired for the North American collection in which we wish to show the adults of both sexes and the fledglings of all birds known to inhabit this region. Early in June Mr. Shrosbree and myself made a collecting trip of a few days to Little Suamico and Kelley Brook in Oconto county to procure material for bird groups. Mr. Shrosbree was gone nine days and I five days. The result of the trip was material for several interesting groups, consisting of fifty-one adult birds, twenty-five nestlings, twenty-four nests, seventy-eight eggs and a series of photographs showing the nests in situ. No attempt was made to obtain birds except for these specific groups as the breeding season is not the time for general collecting. We were greatly assisted in our work by our host, Mr. A. J. Schoenebeck of Kelley Brook, the well known oologist, whose ornithological writings have appeared over another name. His familiarity with birds is such as can only be obtained by many years careful study of them in their natural haunts.

Little work has been done upon reptiles and fishes during the year as we have been too busy with other matters that seemed more pressing; but quite a large number of formaline specimens not heretofore exhibited have been mounted upon white glass slips and provisionally placed on exhibition by Mr. Rohde, including series of fish collected in streams of the state by Drs. E. Copeland and H. V. Ogden and presented by them to the museum. The nomenclature of the exhibited fish has been revised by Miss Wheeler so as to make the labels conform with the names used by Jordan and Evermann in

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their recent monograph. A satisfactory cast of a tiger salamander has been made and carefully painted by Mr. Clowes.

In our former report we mentioned the revision of the extensive collection of shells that had been undertaken. A large series of fresh water univalves, (the Wheatley collection), has been forwarded to Prof. Pilsbry of the Philadelphia Academy of Sciences for study and are not yet returned. The other shells have all been mounted on pasteboard tablets by Miss Wheeler, who has also prepared copy for the large number of labels required. Some hundreds of these have been printed and attached. On these labels we give the scientific name of the shell, its geographical distribution, the exact locality whence the specimen or specimens came and the source of its acquisition. By purchase we have secured a number of alcoholic preparations which, with those on hand and the series of Blashka glass models that the museum fortunately possessed, supplemented by drawings and diagrams, will do considerable towards raising this to the dignity of a Molluscan rather than merely a shell collection. It is our intention to have descriptive labels giving some interesting and useful information, to head the family groups and in some instances perhaps even the genera. This will presumably increase interest in them.

With the other invertebrate collections little has been done except in the case of insects. Mr. Brown has been busy most of the year in assorting, rearranging and otherwise caring for the entomological collections. Little towards making a display in this department has been done during the year because of lack of facilities, chief among which is the lack of space for such display. We have, however, installed a small synoptical collection representing the various orders of insects.

In this second floor exhibition hall it was necessary to remove from exhibition a series of crustacea, filling one wall case, because of the necessity of using the space for the local birds and no other case was available for the crustacea. It will shortly be necessary to remove two groups of turtles still

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remaining in the mammal hall. We fear that these will have to be stored until we can provide more room for the expansion of the reptile collections.

Some work has been done upon the general botanical collection, chiefly by Miss Nehrling, in fastening upon herbarium sheets plants that were either unmounted or temporarily mounted, and in copying and pasting labels; work that she has been able to do while attending to her duties upon the first floor.

The collection of mushrooms has grown considerably, due to presentations of specimens by the Wisconsin Mycological Society and various individuals and to collections made by the museum staff. Mr. Brown has prepared and arranged these specimens in as satisfactory a manner as the material seems to permit.

There have been some additions to the numismatic and bank note collections; but as this has been entirely by donation of single or at the most a few specimens, the growth of the collection has been slight during the year.

An innovation in the museum has been the adding of an exhibit of live specimens. For some time I had pondered over the fact that the museum failed of an exposition of the material with which naturalists worked; conveying the impression that the preserved remains were the all essential. I had also wondered what might be the psychological effect upon the sensitive mind of a child upon which might at any time flash the fact that everything here was dead. From both points of view something seemed to be lacking, and so with your sanction we established our exhibit of live specimens. A glass show case contains an exhibit of our common wild flowers of roadside, meadow and woodland, picked fresh two or three times a week and kept in vases. These are accompanied by labels giving the correct common names. During the season we have had quite a variety of flowering plants, some rare, some earlier than our visitors expected them, some that were

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common enough in certain places but that were unknown from this locality to many. It was gratifying to notice the interest taken in this exhibit by many people and to see how frequently visitors would make note of the correct name of some plant that was probably familiar to them but whose name they had never learned. We have several aquaria, some balanced so as to require no attention other than adding water equivalent to the evaporation, dry jars with earth, and cages. In these we have, or have had during the season, common snakes, alligators, horned toad, painted mud turtles, snapping turtles, toads, tree toads, frogs, tadpoles, mud puppy, small fish, fresh water clams, various species of water snails, water beetles and an exhibition ant's nest. Probably no collection in the museum has attracted the attention of old as well as young as much as this. At the time of its installation we thought the idea original, but have since learned that it has been carried out in several museums in Europe. This helps to confirm us in the idea that it is a not unworthy adjunct to a natural history museum. In the molluscan collection we may diagramatize the mode of locomotion of the Unio, but it can not convey the information as well or forcibly as to have the live animal itself plowing its way through the sand at the bottom of its rectangular all-glass aquarium where the extrusion and retraction of its foot is in plain view. These live things of course come under the special provinces of the aquarium and the zoological and botanical gardens, and we would not wish to carry out the matter very extensively; a few of them, however, seem to leaven the whole loaf and lend additional interest to the usual exhibits. This department has been under the special care of Miss Wheeler, who has met with reasonable success in the care of the animals. Various of our visitors have taken so much interest in the exhibit that they have troubled to bring flowers and animals from distant parts of the city to add to those already shown.

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Upon the third floor we have hung upon the wall, where it properly belongs, the cast of the skeleton of the Plesiosaurus that formerly occupied a large amount of floor space in the mammal hall; have compressed the exhibit of historical objects so as to free one double upright case which has been filled with fossil nautiloids and have added various fossils, minerals and rocks to these respective collections.

An important series of meteorites acquired by exchange during the year we have been unable to display because of lack of a suitable case.

We vacated one case containing an individual exhibit of pottery and stone implements and filled the case with casts of the earliest known human remains, together with a bust showing the artist's conception of the Neanderthal man; have placed upon the top of one of the cases a series of casts of hieroglyphic inscriptions from Oaxaca, Mexico, which formerly occupied one of the cases now containing the local bird collection; have added several new ethnological exhibits, space for which was made by weeding out duplicates and compressing some exhibits.

Several important additions have been made to the Nunnemacher collection and the room devoted to it is now crowded beyond endurance. In February the Custodian attended the sale in Philadelphia of the collection of arms, carvings, etc., of the late Arthur H. Little, who had during his travels acquired a collection similar to though smaller than the Nunnemacher collection. From this sale were obtained a number of interesting objects suitable to add to our own collection. Six shallow wall cases each about ten feet in length have been built and fitted into the panels in the hallway leading between the Nunnemacher room and the third floor laboratory in order to hold the guns of this collection which we hope soon to install therein. In order to have but one series of weapons of civilized man on exhibition, the museum proper sold to the Nunnemacher collection the various guns, pistols, swords and

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bayonets that from time to time had been acquired by purchase and transferred to it all that had been donated. These will be arranged so as to show the evolution of these weapons. As far as I am aware this collection now contains the finest series of fire arms exhibited in any museum in the country. Even with the space gained by the removal of the guns the original Nunnemacher room will be unduly crowded and in a little while it will be imperative to give the collection more space. This can be done by taking the laboratory across the hall now occupied by Messrs. Shrosbree and Clowes; but other room must be furnished them in which to work. Only an addition to the building will afford the necessary ateliers. In order to bring this hallway within the confines of the museum proper it was necessary to place a double door, with casing filling the arch, at the east end of this hall.

We have also carefully gone over all the corrodible articles on this floor and put them in safe condition. Many of the guns, swords, etc., belonging to the general museum collection, as well as numerous spears, knives and other iron objects from Africa, were in bad condition due to neglect. These have all been attended to and the injury arrested and as far as possible repaired. Mr. Sauer carried on this work during the first part of the year under an emergency appointment. A regular appointment was made later, but the incumbent, Mr. George Oxborrow, was seriously ill, served but one day and succumbed to his illness a few days later. Mr. Eichfeld, the present appointee, has shown himself efficient in this work.

During the year we have made various additions to the museum other than above noted. Ten cases and three tables have been built. Three of the largest cases in the museum, measuring twelve feet cube, have been remodeled so that opposite sides will open by sliding. Several cases have been put upon casters so that their positions could be changed. A new inside telephone system with six stations has been installed by Engineer Wilson who has also arranged new inside case

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lights in the Nunnemacher Room and in various group cases. The offices have been decorated and their floors covered by rugs so that they present an appearance harmonious with the beauty of the building. Various alterations have been made in the power department looking towards increased efficiency and economy.

The engineer's report shows a saving to the museum of $2,649.55 upon the sum that would be required to purchase the lignt and heat used were it not produced in the building. This does not charge his department with interest upon the plant but includes all fuel, material, salaries, repairs and other expenditures.

The museum has unfortunately acquired various more or less extensive collections under the stipulation that they should be kept intact and separate from other collections. These are fatal hindrances in the orderly arrangement of our collections and have already been a matter of some little friction. Some of these donors have been approached on the subject and have seen the unreasonableness of such restrictions and have withdrawn them. The whole matter, reduced to its simplest terms, seems to me to be whether the museum should be a repository of monuments to the personal pride of living donors of specimens and of cenotaphs to the dead, or whether it is to cut loose from such puerile matters and pursue its course along scientific lines. Your intentions, I believe, are to no longer accept gifts under such restrictions, but we must soon go back and secure the revocation of the limitations on some of these previously so accepted, or request the donors or their heirs to remove collections now separated from their related objects. Fortunately there are few of these hindrances to our growth, but they furnish evil precedents.

There are, however, ways in which public spirited people can greatly assist us in benefiting the community and at the same time raise noble monuments to their own generosity. Any collection coming within the museum's scope that is rea-

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sonably complete in its own department no matter how restricted, would, I am sure, be gladly received by you and kept as a unit, and the donor's name affixed to it would undoubtedly lend additional interest to it. Perhaps the most satisfactory collections in any of the museums of the country are those that have been made by the use of funds donated by individuals for that specific purpose. It is usually the case that the trained museum man can not only bring together a collection at a less price than it would cost another person to do it, but he is better able to select the specimens required to show in a characteristic manner the special features requiring emphasis. In the eastern museums are many magnificent collections of this sort, dignified monuments to the public spirit of their donors and reflecting great credit on the institutions in which they are; and in nowise interfering with the orderly and scientific arrangement of their exhibition halls, but falling in line and becoming a part of the general scheme of classification. Collections of this nature may be restricted or general. Thus we might have a collection of North American Indian basketry, or the basketry of some particular tribe or state, or a collection showing the evolution of basketry throughout the world, covering all time and peoples as far as possible. A donation might be limited to a modeled group showing a family of some tribe of Wisconsin aborigines pursuing their daily vocations about the home and portraying much of what we know to have been their daily life previous to the advent of the whites. There are almost as many collections of this character that might be built up here as there are different objects worth collecting, comparing and studying and any of them would have scientific worth, educational value and popular interest, and would in nowise be obstructions to the orderly disposition of our other series either in preliminary or completed form. It is to be hoped that this mode of donating may become more common

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here. At present we have only the rich and magnificent Nunnemacher collection and the fund for its increase.

Most of the individual specimens that come to us by donation are undoubtedly given with the honest desire to increase the collections, to benefit the institution; but unfortunately for human nature such laudible and magnanimous motives are not the only ones that inspire gifts. We are frequently bothered by people who some time in the past donated a bird or other specimen and failing to find it on exhibition wish to know where it is. A search of the records may show that it is among the duplicates, not being required in the series, and the party feels aggrieved because his specimen is not given equal prominence to that given by someone else. More rarely specimens, quite unsuitable for our use, have been offered by people who objected to accepting a declination with thanks but insisted that we must take them and give them public credit. The restricted size convenient for labels and the amount of information that it frequently seems advisable to put on them makes the matter of space a vital one. It is, perhaps, a question whether the names of donors of specimens had not better be omitted from the labels and credit for such donations be given only in the daily press, museum records and the annual report. This system, if adopted, might discourage those who donate not for the institution but for personal pride, and thus somewhat reduce our receipts from this quarter. It would give us valuable space on our labels and obviate petty reclamations that annoy and waste our time. The matter may be worth investigation. Fortunately for our respect of human nature the great proportion of our donors are actuated by philanthropic motives and from these we have experienced nothing but helpful appreciation of what the Board of Trustees is doing for the citizens. Visitors from out of town are frequently exuberant in their praise of the museum, which is quite beyond their expectations, and sometimes comparisons with other large museums are made,

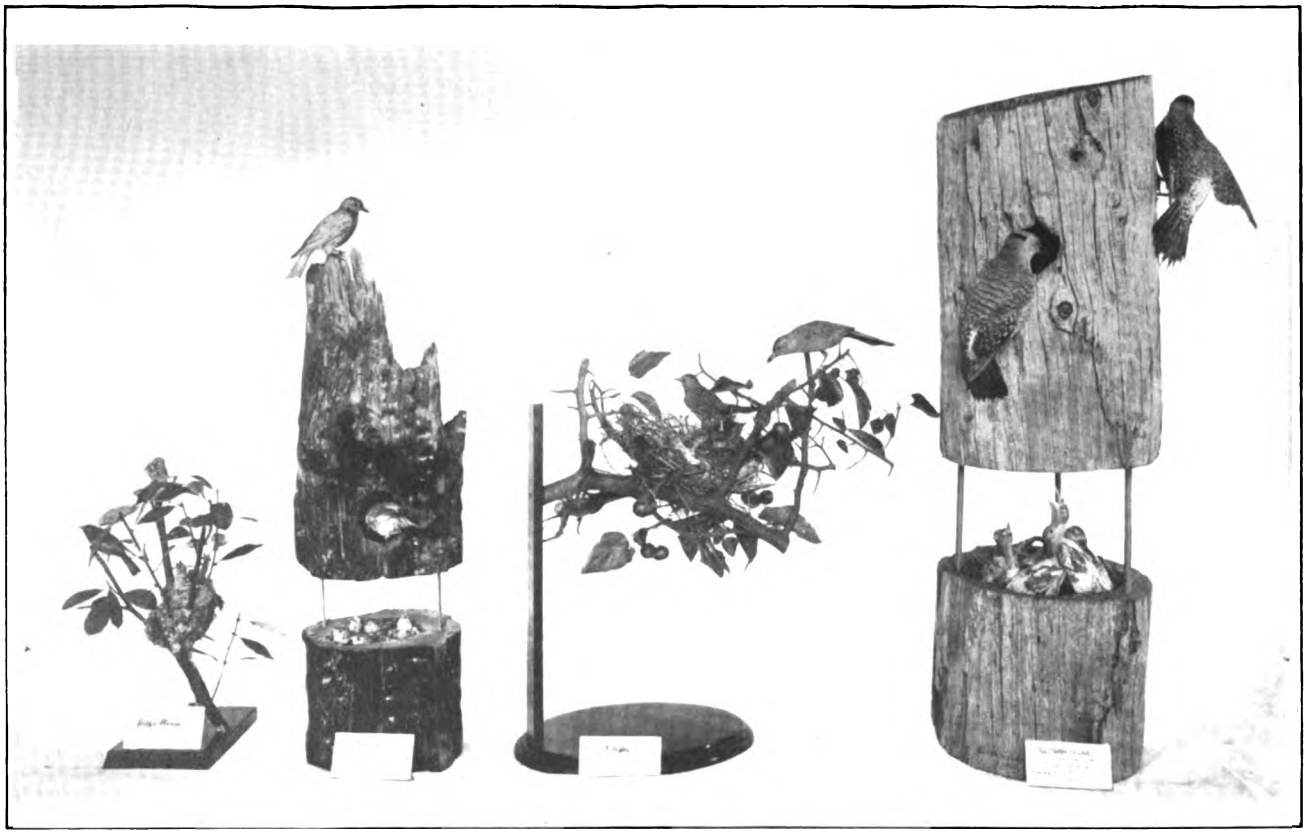
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which, if we could give them credence, would be extremely flattering to this institution.

In the early plans of the museum no provision was made for historical objects. It would perhaps be better if such were entirely removed from the edifice; but as there appears to be a popular demand for something of the sort, and as there is no other established museum in the city, and as it would be an unfortunate division of energies should the municipality establish a separate historical museum, it may be advisable to make some provision for this class of objects when adding to the present building. It is extremely distasteful to me to contemplate anything that might justly bring us under the stigma of a curosity shop, but it is to be hoped that soon our natural history collections will be presented in such form that even the most trivial newspaper reporter would feel ashamed to use that opprobrious epithet. We should instruct the multitude whether they wish it or not. We must make them unconsciously acquire the museum habit; but to do this we must attract them within our doors, and perhaps historical exhibits might be an efficient bait for a certain percentage.

It affords me much pleasure to inform you that the schools of the city are availing themselves more than formerly of the loan collections prepared for their use. During the past year the specimens loaned to the schools equaled those furnished them in the thirty-six months immediately preceding and greatly exceeded those loaned in any preceding twelve months. This indicates a healthy growth in this department of our usefulness. Part of this increased use of our specimens seemed to be directly due to a circular letter that was sent to all the principals in the city. The demand for the loan collections appearing to be less than it should, the suspicion arose that in some ways these failed to meet the wants of the schools. The letter recited what we had to loan and requested information as to what other objects would be desirable for them to have. The replies showed a considerable lack of previous

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YELLOW WARBLER. BLUEBIRD. CATBIRD. NORTHERN FLICKER.

GROUP OF WISCONSIN BIRDS WITH NESTS AND YOUNG.

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knowledge as to what we had to offer and a wide diversity of wishes for new material. That the same condition of ignorance of what we have to loan may not recur it would be well to furnish printed lists that may be pinned in the teachers' assembly room in the various schools so that all may have this before them as a constant reminder.

The only suggestions for new material that seemed in any wise common to the replies were for series of mounted mammals and for industrial exhibits; such for example as a series showing the various stages in the manufacture of iron from the ore to some finished article. This touches upon a branch that has long seemed to me would be a useful one for the museum to take up in its exhibition halls as soon as we have sufficient space to allow of it. The first suggestion as to mounted mammals you have already taken steps towards meeting. The second one would certainly be of much value to the schools and should be complied with at the first favorable opportunity. During the year we have added to these school collections a series of lepidoptera showing the common butterflies and moths of the region. This is accompanied by an eight-page circular giving the main features of the metamorphosis of each, its food plants, the damage inflicted by the noxious ones, the time of appearance, geographical range, etc. This will enable the teachers to make intelligent use of the specimens though previously quite ignorant of the specimens furnished.

These school loan collections now consist of the following: 1. Mounted birds each upon a pedestal sliding into a stiff cardboard box, upon the outside of which is pasted a descriptive label telling of the habits of the bird. At present we have thirty-six species of birds represented by from only a few individuals of some up to forty-five of others. 2. Twelve cases of mounted Lepidoptera consisting of ten butterflies and ten moths. These are protected by fixed glasses so that we may hope they will last for some time. 3. Seven cases containing fifteen archaeological specimens. At present these are without

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descriptive matter and the selection of the specimens seems unwise, so that we are awaiting an opportunity to revise them before preparing a circular of information to accompany them. 4. Forty-six cases containing twenty minerals and twenty rocks. These are provided with a 57-page pamphlet, written by authorities on the subjects, in which each specimen is treated.

Our lecture room for the school children has been well used during the past school year. Miss Merrill was late in returning from her South American trip so that the course began several weeks later than usual. Three classes of about fifty children each were given an hour's lecture on nearly all the school days remaining in the year. During this time the pupils received instruction, illustrated by museum specimens temporarily removed to this room, that is calculated to materially broaden their mental horizons and make more intelligent men and women of them. Personally I have instructed a few classes from the Normal School and The Settlement on Indian stone implements, pottery, basketry and bead work; but my time has been so occupied with other matters that I could not comply, as I should liked to have done, with all the requests made in this line.

In the matter of publication we have made a little start by agreeing to pay $100.00 towards the publication, in conjunction with the Wisconsin Natural History Society, of an annotated list of Wisconsin birds by the late Ludwig Kumlien and N. Hollister, which is now going through the press. The establishing of a series of museum publications will probably be found advisable when we are better equipped to undertake the work.

The press of the city has courteously noticed from time to time additions to the museum, so that the citizens have been informed of what is being done and when new groups are put on exhibition.

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The attendance in the museum is, of course, extremely variable, due to climatic conditions, other attractions, etc. We have no means of determining the number of people visiting the halls, but from observation it seems to be an increasing quantity. Not infrequently they are fairly crowded. Sunday, under ordinary circumstances, is decidedly the day of largest attendance.

I have the unpleasant necessity of chronicling the loss of one of our number whose character and abilities had won the respect of all. Mr. John F. Fidlin having been granted a leave of absence for six months, in order to undertake, on his own account, a collecting trip to Nicaragua, left our employ October 15th. This trip was as unsuccessful as the former one in which he took part as far as collecting was concerned, and exceedingly unfortunate inasmuch as he contracted dysentary from which he died shortly after his return late in March. Mr. Fidlin had the promise of making a good taxidermist, and under suitable guidance might have been a successful collector.

I desire to thank you for the confidence you have shown in my administration of the museum under your charge and to express my appreciation of the co-operation of my fellow workers in the museum in developing the various departments.

Respectfully submitted,

HENRY L. WARD,

Custodian and Secretary.

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INVENTORY.

6,486	Mineralogical and geological specimens, valued at	$7,151 80
14,623	Palaeontological specimens, valued at	7,190 05
22,859	Botanical specimens, (estimate) valued at	1,604 65
800	Protozoans, sponges, corals, echinoderms, etc., valued at	808 50
92,359	Mollusks, valued at	3,313 32
54,316	Insects, (estimate) valued at	3,034 38
282	Crustaceans, valued at	319 05
381	Fishes, valued at	1,525 30
896	Batrachians and reptiles, valued at	2,282 95
6,099	Birds eggs and nests, valued at	4,182 45
7,065	Birds, valued at	19,250 35
845	Mammals, valued at	23,917 25
19,025	Archaeological specimens, valued at	11,710 15
3,959	Ethnological specimens, valued at	12,996 60
2,651	Arms, armors, carvings and other objects of virtu, contained in the Rudolph J. Nunnemacher collection, valued at	72,329 59
2,244	Coins, bank notes, medals, etc., valued at	454 52
10,382	Books, pamphlets, maps, etc., valued at	9,929 20
	Cases and other furniture, jars, conservation supplies and stationery, valued at	51,238 55
245,272		$233,238 66

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FINANCIAL STATEMENT OF THE MUSEUM.

DEBIT.

Balance in Museum fund, Sept. 1, 1902.....		$10,846 91
Refunded from various sources.....		546 94
Appropriation to Museum fund, Jan. 1, 1903...		24,554 48
		$35,948 33

CREDIT.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:		
Anthropology and ethnology.....	$475 50	
Birds	723 90	
Building repairs	2 90	
Cleaning supplies	97 56	
Conservation supplies	84 50	
Crustaceans and insects.....	7 04	
Fishes and reptiles.....	12 00	
Furniture	2,140 21	
Insurance	360 00	
Library	680 03	
Light (Museum)	11 44	
Lower invertebrates	104 42	
Mammals	397 07	
Minerals and rocks.....	128 81	
Miscellanies	251 58	
Payroll	16,767 59	
Permanent improvements	198 86	
Postage and freight.....	255 57	
Power department (fuel).....	1,979 20	
Power department (light).....	18 96	
Power department (material).....	358 46	
Power department (repairs).....	6 25	
Repairs	1 85	
Stationery and printing.....	195 83	
Telephone	153 50	
Traveling expenditures	77 10	
Wages	213 76	
Water tax	142 00	
		25,845 89
Balance in Museum fund Sept. 1, 1903...		$10,102 44

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FINANCIAL STATEMENT OF THE RUD. J. NUNNEMACHER FUND.

DEBIT.

Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1902		$936 00
Annual interest on $8,000 at 5 per cent. from Feb. 1, 1902, to Feb. 1, 1903		400 00
Paid over to city treasurer by the Rudolph J. Nunnemacher estate		1,000 00
		$2,336 00

CREDIT.

Amounts paid by warrants on the city treasurer since last annual statement was rendered	$1,910 72	
		1,910 72
Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1903		$425 28

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LIST OF INSURANCE.

Fire Association of Philadelphia	$2,000 00
Home Insurance Co., New York	7,000 00
National Union Fire Insurance Co., of Pittsburgh	2,000 00
Orient Insurance Co., Hartford, Conn	1,500 00
Phenix Insurance Co., of Brooklyn, N. Y	2,000 00
Sun Insurance Office, of London, England	1,500 00
The Concordia Fire Insurance Co., of Milwaukee, Wis	4,500 00
The Germania Fire Insurance Co., Pittsburgh, Pa	2,500 00
The Spring Garden Insurance Co., Philadelphia	2,000 00
Total	$25,000 00

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APPENDIX

ACCESSIONS TO THE MUSEUM AND ITS LIBRARY.

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ZOOLOGY.

DONATIONS.

Anderson, Mrs. J. K., Milwaukee, Wis.		
1	Singing Cricket,	Portugal.
Aschermann, A. F., Milwaukee.		
1	African Indigo Finch,	Captivity, Milwaukee.
1	European Crossbill,	Germany.
1	Limosa fedoa,	Coronado Beach, Cal.
1	Paradise Finch,	Africa.
Bacon, E. M. Milwaukee.		
1	Passerella iliaca,	Milwaukee.
Beach, H., Milwaukee.		
1	Lucanus cervus.	
Brandler, Chas., Milwaukee, Wis.		
1	Aegialites vocifera,	Milwaukee Co., Wis.
1	Anthus pensilvanicus,	" " "
1	Chordeiles virginianus,	" " "
1	Compsothlypis americana,	" " "
1	Cyanospiza cyanea,	" " "
1	Dendroica blackburniae,	" " "
1	" caerulescens,	" " "
1	" maculosa,	" " "
2	Falco sparverius,	" " "
3	Gallinago delicata,	" " "
2	Hylocichla guttata pallasii,	" " "
2	Merganser serrator,	" " "
1	Nyctala acadica,	" " "
1	Passerina cyanea,	" " "
1	Rallus elegans,	" " "
2	Spermophilus tridecemlineatus,	" " "
Brandler, Mrs. Chas., Milwaukee, Wis.		
3	Loxia curvirostra minor,	Cataline, Wis.
Brandler, Walter, Milwaukee, Wis.		
1	Nycticorax nycticorax naevius,	Milwaukee Co., Wis.
1	Podilymbus podiceps,	" " "
1	Tamias striatus,	" " "
Breitkreutz & Goldsmith, Milwaukee, Wis.		
1	Bassaris astuta,	San Antonio, Texas.
1	Felis pardalis,	Captivity, Milwaukee.
1	Lynx,	" "
1	Taxidea americana,	" "

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Brown, Abe, Milwaukee, Wis.		
1	Putorius noveboracensis,	Milwaukee Co., Wis.
2	Sciurus ludovicianus,	Captivity, Milwaukee.
Brown, C. E., Milwaukee.		
32	Coleoptera,	Wisconsin.
9	Diptera,	"
6	Hemiptera,	"
14	Hymenoptera,	"
1	Lampsilis recta,	Fox River, Wis.
1	" ellipsiformis,	Milwaukee River, Wis.
14	Lepidoptera,	Wisconsin.
1	Neuroptera,	"
1	Orthoptera,	"
1	Polygyra exoleta,	Silver Springs, Wis.
1	" hirsuta,	" " "
5	" monodon,	" " "
2	" multilineata,	" " "
2	" profunda,	" " "
4	Pyramidula alternata,	" " "
19	" striatella,	" " "
59	Succinea ovalis,	" " "
1	Symphynota complanata,	Milwaukee River, Wis.
1	Tremex columba,	" " "
Brownlee, Robt., Milwaukee.		
4	Saplings cut by Beavers,	Wisconsin.
Bruncken, Ernst, Biltmore, N. C.		
17	Goniobasis livescens,	Creek at Biltmore, N. C.
Burr, Eddie, Milwaukee.		
1	Dicotyles torquatus, young,	La Poza, Sonora, Mex.
Clement, J. H., Milwaukee.		
1	Necturus maculatus,	Nashotah Lake, Wis.
Cloos, August, Milwaukee, Wis.		
1	Aquila chrysaetos,	Captivity, Milwaukee.
Comee, Wm. P., Milwaukee, Wis.		
1	Ommastrephes sagittatus,	New England Coast.
Copeland, Dr. E., Ogden, Dr. H. V. }	Milwaukee, Wis.	
2	Ameiurus nebulosus,	Bark River, Wis.
4	" melas,	Menomonee River, Wis.
2	Boleosoma nigrum,	" " "
2	Campostoma anomalum,	Milwaukee River, Wis.
2	Couesius plumbeus,	Lake Superior, Ont.
1	Erimyzon sucetta,	Oconomowoc River, Wis.
5	Etheostoma caeruleum,	" " "
4	" iowae,	Bark River, Wis.

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3 Eucalia inconstans, Menomonee River, Wis.
2 Eupomotis gibbosus, " " "
3 Hadropterus aspro, Root River, Wis.
2 Hybognathus nuchalis, Menomonee River, Wis.
2 Hybopsis kentuckiensis, Root River, Wis.
3 Leuciscus elongatus, Menomonee River, Wis.
2 Notropis atherinoides, Milwaukee River, Wis.
2 " cornutus, " " "
2 " blennius, Oconomowoc River, Wis.
3 " cayuga, Black River, Wis.
3 " heterodon, Hartland, Wis.
2 " gilberti, Tococatic River, Wis.
3 " whipplii, " " "
1 Percina caprodes zebra, Milwaukee River.
4 Pimephales promelas, Milwaukee County.
2 " notatus, Root River, Wis.
2 Rhinichthys atronasus, Fish Creek, Wis.
3 Schilbeodes gyrinus, Root River, Wis.
3 Semotilus atromaculatus, Menomonee River, Wis.
2 Umbra limi, " " "

Corcoran, Ivan, Milwaukee.
1 Limb of Mountain Ash for bird group.

Davey, Miss Jessie B., Janesville, Wis.
1 Lasiurus cinereus, Janesville, Wis.
3 " noveboracensis, " "

Derkin, E. C., Milwaukee.
1 Macacus lasiotis, Captivity, Milwaukee.

Dernehl, P. H., Milwaukee.
4 Insects, Philippine Isls.

Doe, General Jos. B., Milwaukee.
1 Fulica americana.

Diehl, Conrad, Milwaukee.
2 Dicotyles torquatus (young), La Poza, Sonora, Mex.

Doyle, James J., Milwaukee.
1 Falco columbarius, Milwaukee.

Duerlewanger, Aug., Milwaukee.
1 Merula migratoria, Milwaukee.

Dunn, Thos. }
Nebel, Oscar } Milwaukee.
1 Chordeiles virginianus, (young), Milwaukee.

Ehlert, Elmer, Milwaukee.
1 Passer domesticus, Milwaukee.

Elkey, W. H., Milwaukee.
1 Hair bezoar from calf's stomach, Milwaukee.

Ewens, A. C., Milwaukee.
200 Insects, Various localities.

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Falk, Clarence R., Milwaukee.

1	Cassis cornuta,	East and West Indies.
4	Conus virgo,	Mauritius.
3	" literatus,	Ceylon, etc.
4	Cypraea arabica,	Australia, Japan, etc.
3	" tigris,	Australia.
3	Fasciolaria trapezium,	Mauritius.
1½	Hippopus,	Torres Straits
½	" maculatus,	" "
2	Melo,	Indian Ocean.
2	Melongena pugilina,	Ceylon, etc.
4	Mitra episcopalis,	Singapore.
3	Nautilus pompilius,	Polynesia.
5	Placuna,	Singapore.
6	Pterocera,	Polynesia, Australia, etc.
3	Strombus canarium,	Singapore.
5	" luhuanus,	Japan.
2	Terebra,	Hawaiian Isls.
4	" maculata,	" "
½	Tridacna squamosa,	Indian Ocean.
1	Triton tritonis,	" "
2	Tubipora musica,	Singapore.
1	Turbo marmoratus,	Philippines.
1	Voluta musica,	West Indies.
5	" scapha,	Singapore.
3	" vespertilio,	"

Fernekes, Val., Milwaukee.

1	Liopeltis vernalis,	Milwaukee County.
7	Odonata,	" "
1	Storeria dekayi,	" "
1	" occipitomaculata,	" "

Fiebrantz, A. M., Milwaukee.

14	Columba livia domestica,	Captivity, Milwaukee.

Freuck, Wm., Milwaukee.

1	Dendroica virens,	Milwaukee.

Haase, Miss Louisa, Milwaukee.

1	Seiurus aurocapillus,	Milwaukee.

Hackendahl, Ed., Milwaukee.

1	Chordeiles virginianus,	Milwaukee.

Hagenbeck, Carl, Germany.

2	Felis concolor, (young),	Captivity, Milwaukee.

Hamann, Prof. Emil, Milwaukee.

1	Cyanospiza cyanea,	Milwaukee.

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Hamilton, H. P., Two Rivers, Wis.

11	Anodonta grandis, var.,	Mishicott River, Wis.
2	Lampsilis alatus,	" " "
61	" luteolus,	" " "
1½	Plagiola donaciformis,	" " "
6	Quadrula undulata,	" " "
7	Symphynota complanata,	" " "

Heim, John F., Milwaukee.

1	Parrot,	Captivity, Milwaukee.

Heyn, Louis, Milwaukee.

1	Columba livia domestica,	Milwaukee.

Hirsch, H., Milwaukee.

1	Asio accipitrinus,	Berthelet, Wis.
2	Eggs of Buteo lineatus,	Elm Grove, Wis.
1	Megascops asio,	Milwaukee Co., Wis.

Jacobs, Miss Olga, Milwaukee.

1	Moth,	Milwaukee.

Tuttle, Lily, } Milwaukee.
Jaeger, Eva, }

1	Liopeltis vernalis,	Milwaukee.

Jansen, L. A., Milwaukee.

1	Splashed Russian Trumpeter, imported.	

Johnson, F. F., Milwaukee.

1	Skull of Bison bison,	Montana.

Jones, Wm., Milwaukee.

1	Corydalis cornuta,	Milwaukee.

Kaul, Alfred, Milwaukee.

1	Lasionycteris noctivagans,	Milwaukee.

Kaul, Chas. J., Milwaukee.

1	Moth,	Milwaukee.

Kirchner, H. A., Milwaukee.

1	Limax maximus,	Milwaukee.

Korb, Wm., Milwaukee.

1	Columba livia domestica,	Milwaukee.
1	Frillback pigeon,	Germany.
1	Polish Lynx pigeon,	Hungary.

Kraus, John, Milwaukee.

2	Amblystoma tigrinum,	Milwaukee.
1	Colaptes auratus luteus,	Wauwatosa.
1	Trochilus colubris,	"

Kümmel, Mrs. E. A., Milwaukee.

16	Hummingbird skins,	Ecuador.

Lamboy, Raymond, Milwaukee.

1	Phrynosoma cornuta,	Topeka, Kan.

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Lange, Dr. C. J., Milwaukee.
1 Merganser americanus, Whitefish Bay, Wis.
Laue, A. F., Milwaukee.
1 Geothlypis trichas, Milwaukee.
Laur, Mrs. P., Milwaukee.
1 Wasp, Milwaukee.
1 Cecropia moth, "
Mann, F. J., Milwaukee.
1 Cervus virginianus albino, Pembine, Wis.
Mann, Karl, Milwaukee.
3 Putorius noveboracensis, Dickinson Co., Mich.
Manthey, Fred, Milwaukee.
1 Mud wasp nest, Milwaukee.
Martin, Wm., Milwaukee.
1 Colymbus auritus, Milwaukee Co., Wis.
1 Merganser serrator, Milwaukee.
Maschauer, Lorenz, Milwaukee.
1 Cock of the woods, Germany.
Meinecke, Adolph, Milwaukee.
3 Bees in excavated twig, Chunchula, Ala.
2 Dione lupinaria, Florida.
56 Insects, "
2 Locusts, Milwaukee.
1 Lot of galls on Quercus cinerea caused by Amphibolips cinerea; and adult insects of same, Florida.
49 Odonata, "
Mertl, Frank, Milwaukee.
1 Chrysemys picta, Pewaukee Lake, Wis.
Meyer, John A., Milwaukee.
1 Corydalis cornuta, Milwaukee.
Miller, O. F., Milwaukee.
1 Bear skull, Captivity, Milwaukee.
1 Taxidea americana, " "
Mitchell, Prof. I. N., Milwaukee.
1 Marsh Wren nest, Stoney Lake, Mich.
3 Microtus pennsylvanicus, with nest, Nagawicka, Wis.
Mommsen, Meinard, Milwaukee.
1 Merganser americanus, Lake Michigan, Wis.
Monroe, C. E., Milwaukee.
1 Meloe augusticollis, Milwaukee.
Mueller, Willie, Milwaukee.
1 Seiurus aurocapillus, Milwaukee.
Nelson, Nortie, Milwaukee.
1 Porzana carolina, Milwaukee.

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Ogden, Dr. H. V., Milwaukee.

1	Alasmodonta rugosa,	St. Croix River, Wis.
1	Anodonta grandis,	" " " "
3	Lampsilis luteolus,	" " " "
1	" rectus,	" " " "
1	" ventricosus,	" " " "
3	Limnaea megasoma,	" " " "
1	Quadrula plicata,	" " " "
1	" rubiginosa,	" " " "
1	" undulata,	" " " "

Pabst, Fred. Jr., Milwaukee.

66	Mounted birds,	North America.
2	" mammals,	" "

Peckham, Dr. Geo. W., Milwaukee.

1	Tarantula,	Mexico.

Rohde, Paul C., Milwaukee.

4	Aegialitis vocifera,	Wauwatosa, Wis.
1	Merula migratoria,	Milwaukee.
1	Ophiobolus calligaster,	Nagawicka, Wis.
1	Phasianus torquatus (young),	Captivity.
5	" " (eggs),	"
1	Podilymbus podiceps,	Nagawicka, Wis.
2	Porzana carolina,	" "

Runkel, F. P., Milwaukee.

1	Sciurus ludovicianus,	Reeseville, Wis.

Runzler, W. T., Milwaukee.

1	Monohammus confusor,	Milwaukee.

Sauer, Hans, Milwaukee.

1	Columba livia domestica,	Milwaukee.

Schoenebeck, A. J., Kelley Brook, Wis.

3	Eggs of Jacana spinosa,	Tancasnequi, Mex.
3	Eggs of Pitangus derbianus,	" "

Severn, H. A., Milwaukee.

12	Diaphomera femorata.	

Shrosbree, Geo., Milwaukee.

2	Astragalinus tristis,	Milwaukee Co., Wis.
3	Bats,	" " "
1	Colymbus auritus,	Muskego Lake, Wis.
1	Cyanospiza cyanea,	Milwaukee Co., Wis.
2	Dendroica aestiva,	" " "
2	" caerulescens,	" " "
5	Galeoscoptes carolinensis,	" " "
1	Melospiza melodia,	" " "
2	Progne subis,	" " "
1	Putorius noveboracensis,	" " "

Digitized by Google

1	Sayornis phoebe,	Milwaukee Co., Wis.
1	Sphyrapicus,	" " "
1	Tringa maculata,	" " "

Shrosbree, Wm. J., Ravenswood, Ill.

1	Scalops aquaticus machrinus,	Ravenswood, Ill.

Spiegel Co., The A., Milwaukee.

1	Live alligator,	Florida.

Stewart, Miss Mary E., Milwaukee.

3	Ostrea borealis.	
1	Solarium,	Gulf of Mexico.

Teller, Mrs. E. E., Milwaukee.

1	Sphenodon punctata,	New Zealand.

Torney, Julius, Milwaukee.

1	Porzana carolina,	Milwaukee.
1	Setophaga ruticilla,	"

Vogel, Wm. H., Milwaukee.

108	Odonata,	India.

Ward, Henry L., Milwaukee.

137	Coleoptera,	Milwaukee.
1	Fulica americana,	"
1	" "	Lake Nagawicka, Wis.
12	Hemiptera,	Milwaukee.
10	Hymenoptera,	"
1	Lanius borealis,	Delafield, Wis.
2	Sitta carolinensis,	" "
1	Tachycineta bicolor,	Milwaukee.

Webb, Lindsay, Milwaukee.

1	Coccyzus americanus,	Milwaukee.
1	Seiurus aurocapillus,	"
1	Wilsonia canadensis,	"

Weidenbacher, H., Milwaukee.

1	Scutigera forceps,	Milwaukee.

Wille, Fritz, Milwaukee.

1	Progne subis,	Milwaukee.

Windfelder, E. W., Milwaukee.

1	Colymbus auritus,	Milwaukee Co., Wis.

Wolfenden, Abraham, Milwaukee.

220	Coleoptera,	Milwaukee.
3	Diptera,	"
5	Hemiptera,	"
4	Hymenoptera,	"
7	Lepidoptera,	"
1	Orthoptera,	"

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1	Actodromas minutilla,	Little Suamico, Wis.
1	Agelaius phoeniceus,	Kelley Brook, Wis.
1	Albiorchilus hiemalis,	" " "
1	Ampelis cedrorum,	" " "
11	Anodonta grandis,	Little Suamico, Wis.
2	Ardetta exilis,	" " "
1	Botaurus lentiginosus,	" " "
2	Bubo virginianus,	Kelley Brook, Wis.
2	Chordeiles virginianus,	" " "
9	Colaptes auratus luteus,	" " "
2	Corvus americanus,	" " "
1	Cyanocitta cristata,	" " "
1	Dendroica virens,	" " "
2	" pensylvanica,	" " "
7	Eggs of Ceryle alcyon,	Little Suamico, Wis.
2	" of Chordeiles virginianus,	Kelley Brook, Wis.
1	Gallinula galeata,	Little Suamico, Wis.
9	Hydrochelidon nigra surinamensis,	" " "
5	Hylocichla guttata pallasii,	Town Milwaukee, Wis.
2000	Insects,	Milwaukee Co., Wis.
1	Iridoprocene bicolor,	Little Suamico, Wis.
16	Larus philadelphia,	Kenosha, Wis.
1	" franklini,	" "
1	Melospiza georgiana,	Little Suamico, Wis.
2	Molothrus ater,	Town Milwaukee, Wis.
1	Nest of Sialia sialis,	Kelley Brook, Wis.
1	" " Sphyrapicus varius,	" " "
1	" " Seiurus aurocapillus,	" " "
1	" " Hylocichla mustelina,	" " "
1	" " Setophaga ruticilla,	" " "
3	Nests and 18 Eggs of Gallinula galeata,	Little Suamico, Wis.
3	Nests and 7 Eggs of Podilymbus podiceps,	Little Suamico, Wis.
1	Nest and 4 Eggs of Colymbus auritus,	Little Suamico, Wis.
3	Nests and 3 Eggs of Hydrochelidon nigra surinamensis,	Little Suamico, Wis.
1	Nest and 3 Eggs of Riparia riparia,	Little Suamico, Wis.
3	Nests and 5 Eggs of Telmatodytes palustris,	Little Suamico, Wis.
1	Nest and 4 Eggs of Xanthocephalus xanthocephalus,	Little Suamico, Wis.
1	Nest and 2 Eggs of Ardetta exilis,	Little Suamico, Wis.

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1	Nest and 4 Eggs of Dendroica virens,	Kelley Brook, Wis.
1	" " 1 " " Vireo solitarius,	" " "
1	" " 3 " " Dendroica pensylvanica,	Kelley Brook, Wis.
1	Nest and 3 Eggs of Cyanospiza cyanea,	Kelley Brook, Wis.
3	Pelidna alpina pacifica,	Little Suamico, Wis.
1	Piranga erythromelas,	Kelley Brook, Wis.
1	Progne subis,	" " "
1	Quiscalus quiscula aeneus,	Town Milwaukee, Wis.
2	Sciurus hudsonicus minnesota,	Kelley Brook, Wis.
10	Sialia sialis,	" " "
6	Sphyrapicus varius,	" " "
1	Sterna hirundo,	Little Suamico, Wis.
3	Telmatodytes palustris,	" " "
6	Xanthocephalus xanthocephalus,	" " "

ACQUIRED BY EXCHANGE.

1	Carpodacus purpureus,	Milwaukee Co., Wis.
1	Coccyzus americanus,	" " "
1	Hesperiphona vespertina,	" " "
1	Iridoprocne bicolor,	" " "
1	Melospiza cinerea melodia,	" " "
2	Molothrus ater,	" " "
1	Otocoris alpestris praticola,	" " "
1	Podilymbus podiceps,	Fox River, Wis.
1	Vireo olivaceus,	Milwaukee Co., Wis.
18	Blown larvae,	United States.
70	Coleoptera,	" "
300	Coleoptera,	Europe.
420	Diptera,	North America.
30	Lepidoptera,	United States.
100	Lepidoptera,	Foreign.
20	Odonata,	United States.

ACQUIRED BY PURCHASE.

1	Aplysia dactylomela,	Bermuda.
2	Argina pexata,	Downville, R. I.
1	Argiope cuneata,	Mediterranean Sea.
4	Asterias forbesii,	Wood's Holl, Mass.
1030	Birdskins,	North American.
1	Buccinum undatum,	Chatham, Mass.
1	Canis occidentalis,	Marsh, Wis.
1	Carinaria mediterranea,	Mediterranean.

Digitized by Google

1	Chaetopleura apiculata,	Wood's Holl, Mass.
1	Chaetopterus pergamentaceus,	" " "
1	Chiton,	Porto Rico.
1	Crania anomala,	Mediterranean.
1	Crucibulum striatum,	Gay Head, Mass.
1	Cymbula peronii,	Mediterranean.
1	Dendronotus,	Chatham, Mass.
1	Dipsas plicatus, containing 9 figures of Buddha,	China.
1	Discinisca laevis,	Peru.
1	Egg case of Fulgur carica,	Vineyard Sound, Mass.
1	" " " Sycotypus canaliculatus,	Wood's Holl, Mass.
1	Haliotis,	California.
1	" assinia,	Australia.
2	Key Hole Limpets,	Porto Rico.
1	Limulus polyphemus,	West Falmouth, Mass.
1	Lingula albida,	California.
2	Liocardium mortoni,	Wood's Holl, Mass.
1	Macoma fragilis,	Falmouth, Mass.
1	Macrorhinus leoninus,	So. Indian Ocean.
5	Metridium marginatum,	Wood's Holl, Mass.
1	Mactra solidissima,	Provincetown, Mass.
1	Modiola modiolus,	Chatham, Mass.
1	" plicatula,	Wood's Holl, Mass.
1	Nautilus pompilius,	Polynesia.
1	Nereis virens,	Wood's Holl, Mass.
1	Pecten semicostatus,	Gay Head, Mass.
1	Petricola pholadiformis,	Wood's Holl, Mass.
1	Pholas costata,	Florida.
1	Sepiola rondoletii,	Mediterranean.
1	Series of models, showing the development of chicken,	France.
1	Solenomya velum,	Wood's Holl, Mass.
1	Sypho pygmaeus,	Chatham, Mass.
1	Tagelus gibbus,	Buzzard's Bay, Mass.
1	Terebratulina septentrionalis,	Maine.
1	Teredo navalis,	Mediterranean.
1	Tethya cervina,	Porto Rico.
1	Tridacna gigas,	Australia.
1	Vermetus spiratus,	Florida.
4	Young Struthio camelus and 4 eggs,	California.

BOTANY.

DONATIONS.

Ambrosia Chocolate Co., Milwaukee.

2	Cocoa pods and beans,	Brazil.

Digitized by Google

Davis, Dr. J. J., Racine, Wis.
21 Parasitic Fungi, Wisconsin.
Gerlach, Aug., Milwaukee.
1 Peziza aurantia, Milwaukee.
Meinecke, Adolph, Milwaukee.
9 Fungi, Gotha, Fla.
Taylor, M. M., Milwaukee.
1 Growth Clitocybe illudens, Milwaukee Co., Wis.
Wisconsin Mycological Society, Milwaukee.
26 Fungi, Milwaukee Co., Wis.

MUSEUM EXPEDITIONS.

200 Fungi, Milwaukee Co., Wis.

PALAEONTOLOGY.

DONATIONS.

Barth, Dr. Geo. P., Milwaukee.
1 Periechocrinus, Bridgeport, Ill.
Fortier, C. L., Milwaukee.
1 Heteracanthus politus (spine), Berthelet, Wis.
Jenkins, Judge James G., Milwaukee.
1 Elephas primigenius (molar tooth), Yukon River, Alaska.
Kunst, Rev. C. J., Milwaukee.
1 Phragmoceras nestor, Lannon, Wis.
Milwaukee Cement Co., Milwaukee.
1 Dinichthys (plate), Berthelet, Wis.
Ward, Henry L., Milwaukee.
1 Diphyphyllum, Lime Rock, N. Y.
3 " simcoense, " " "
1 Favosites epidermatus, " " "
2 Gyroceras cyclops, " " "
1 Machaeracanthus major (jaw), " " "
1 Onychodus (tooth), " " "
1 Syringopora hissingeri, " " "
1 " perelegans, " " "
Wilbur Seed Meal Co., Milwaukee.
1 Saurian Vertebra, Rock River, Wyo.

ACQUIRED BY EXCHANGE.

1 Astraea cavernosa, Gladenbach, Germany.
4 Atrypa aspera, " "
3 " reticularis, " "
3 " " Gotland, "
1 Cardium acuticostatum, Quiriquina, Chile.

Digitized by Google

1	Cerithium margaritaceum,	Mainzer Becken, bei Kreuznach, Germany.
1	Cerithium plicatum,	Kreuznach, Germany.
8	" pictum,	" "
1	Chonetes sarcinulata, Grauwacke,	Lindlar, Rgbz. Köln, Germany.
1	Cistodictya hamiltonensis,	Berthelet, Wis.
3	Congeria triangularis,	Plattensee, Ungarn.
2	Cyrena lato-ovata, Schieferflok,	am Rahburger, Brunnen, Germany.
1	Exogyra arietina,	Texas.
1	" texasana,	"
3	Favosites polymorpha,	Gladenbach, Germany.
3	Loxonema,	" "
3	Macrocheilus arculatus,	" "
8	Murchisonia,	" "
2	" bilineata,	Raffrath, Rgbz. Köln, "
2	Natica jurensis,	Wesergebirge, "
1	" subcostata,	Köln, "
2	Sharks' teeth,	Berg, Maiella, Abruzzen.
1	Spongites,	Gladenbach, Germany.
3	Stringocephalus burtini,	" "
4	Terebratula,	" "
1	" bicaniculata,	Arensberg bei Rinteln, Ger.
1	" multiformis,	Vahlberg, Germany.
4	Uncites gryphus,	Gladenbach, "
1	Venus isocardioides,	Porta Westphalica, "

MINERALOGY AND GEOLOGY.

DONATIONS.

Buxbaum, Oscar, Milwaukee.

1	Pyrite pseudomorph,	Milwaukee.

Eagle, W. S., Milwaukee.

1	Amygdaloid,	Milwaukee.

Elkey, W. H., Milwaukee.

1	Pyrite,	Oshkosh, Wis.

Foerster, Ernst, Milwaukee.

1	Calcareous tufa,	Germany.

Kümmel, Mrs. E. A., Milwaukee.

2	Silver ores,	Casapalca, Peru.

Lapham, Mrs. Chas., Milwaukee.

1	Calcite geode,	Stone City, Ia.

McLaren, W. A., Milwaukee.

1	Sulphur,	Mt. Popocatapetl, Mex.

Digitized by Google

O'Donnell, James, Milwaukee.

1	Limestone, showing a vein of calcite,	Milwaukee.
1	Marcasite,	"

Spurny, V. M., Milwaukee.

1	Spodumene (drift),	Milwaukee.

Ward, Prof. H. A., Chicago, Ill.

1	Rhodochrosite,	Colorado.
2	Turquoise in matrix,	New Mexico.

Wilbur Seed Meal Co., Milwaukee.

1	Fossil wood,	Rock River, Wyo.

ACQUIRED BY EXCHANGE.

2	Bornite in garnetiferous quartz,	Parry Sound, Ont.
14	Carnotite,	Paradox, Col.
1	Deposits from vapor of hot springs,	Pagosa Springs, Col.
50	Garnets,	Sunset Creek, Alaska.
1	Gold-bearing "Lavender Sand,"	Prince William Sound, Alaska.
1	Gold-bearing "Ruby Sand,"	Beach at Nome, Alaska.
1	Magnetic iron sand,	Sunset Creek, Alaska.
1	Meteorite (Aerolite),	Bjurböle, So. Coast of Finland.
1	" "	Forest City, Ia.
1	" "	Long Island, Phillips Co., Kan.
1	" "	Baratta, N. S. W., Australia.
1	" "	Gilgain Station, N. S. W., Australia.
1	" (Siderite),	Toluca, Mex.
1	" "	Brenham, Kiowa Co., Kan.
1	" "	Mt. Joy, Adams Co., Penn.
1	" "	Misteca, Oaxaca, Mex.
1	" "	St. Genevive Co., Mo.
1	" "	Arispe, Sonora, Mex.
1	Reticulated galena,	Hazle Green, Wis.
2	Smithsonite with sphalerite and galena,	Galena, Ill.
1	Sphalerite,	Yellville, Ark.

ACQUIRED BY PURCHASE.

1	Meteorite,	Lane Co., Kan.
1	"	Ness Co., Kan.
3	Sponge gold, from Great Boulder Proprietary Gold Mines,	Kalgurli, Western Australia.
1	Tellurium,	Vulcan Mine, Gunnison Co., Col.

ARCHAEOLOGY.

DONATIONS.

Brockmann, F. H., Milwaukee.

1	Grooved stone axe,	Sioux City, Ia.

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Daleau, Francois, Dordogne, France, through Ch. Doerflinger.

38	Burned and charred bones from fireplaces,	Pair-non-Pair, France.
1	Flint point,	Pair-non-Pair, France.
2	Fragments from tusk of Elephas primigenius,	Pair-non-Pair, France.
1	Left calcaneum of Bos sp.,	Pair-non-Pair, France.
1	" " of Equus sp.,	" "
1	" navicular-cubo of Bos sp.,	" "
1	Right astralagus of Bos sp.,	" "
1	" " of Equus sp.,	" "
10	Teeth of Equus sp.,	" "
4	" of Bos sp.,	" "
1	Upper molar of Rhinoceros tichorjnus,	" "

Ellsworth, Wm., H., Milwaukee.

58	Artifacts of shell, bone, stone and pottery,	Casa Grande, Ariz.
1	Mealing stone, old ruins of Owat-obi, destroyed 1707,	Apache, Co., Ariz.
1	Pestle-shaped stone,	Near Florence, Ariz.
1	Stone ball,	Near Montello, Wis.
1	" mortar and ball,	Near Florence, Ariz.
1	" pestle,	New Bedford, Mass.

Hamilton, H. P., Two Rivers, Wis.

70	Stone chips, from ancient village sites,	Goldendale, Wis.

Porter, R. L., Mukwonago, Wis.

1	Grooved stone axe,	Waukesha Co., Wis.
1	Stone knife,	" " "
2	" celts,	" " "
12	" arrows and spearheads,	" " "
56	" " " "	Mukwonago, Wis.
2	" axes,	" "
1	" celt,	" "
1	" knife,	" "
4	" perforators,	" "

Zess, Frank, Milwaukee.

1	Stone spearhead,	Milwaukee Co., Wis.

ACQUIRED BY PURCHASE.

3	Bone awls,	Apache Co., Ariz.
2	Boxes Indian paint,	" " "
1	Bust of Neanderthal man.	
1	Cast of calvarium of Neanderthal man, exterior,	near Düsseldorf, Prussia.
1	Cast of calvarium of Neanderthal man, interior,	near Düsseldorf, Prussia.

Digitized by Google

1	Cast of skull of Spy Skeleton, No. 1, near Namur, Belgium.	
1	Cast of superior maxillare, No. 1, near Namur, Belgium.	
1	" " mandible, " " " "	
1	" " half of right clavicle, " " " "	
1	" " portion of right humerus, No. 1, near Namur, Belgium.	
1	Cast of portion of left humerus, No. 1, near Namur, Belgium.	
1	Cast of left radius, No. 1, near Namur, Belgium.	
1	" " head of left ulna, " " " "	
1	" " right femur, " " " "	
1	" " left patella, " " " "	
1	" " left tibia, " " " "	
1	" " skull of spy skeleton, No. 2, near Namur, Belgium.	
1	Cast of portion of right humerus, No. 2, near Namur, Belgium.	
1	Cast of portion of right radius, No. 2, near Namur, Belgium.	
1	Cast of head of right ulna, No. 2, near Namur, Belgium.	
1	" " upper end, left femur, No. 2, near Namur, Belgium.	
1	Cast of base of left fibula, No. 2, near Namur, Belgium.	
1	" " skull of Engis Man.	
1	Copper spearhead,	Washington Co., Wis.
1	Jar, corrugated,	Apache Co., Ariz.
2	Pottery bowls,	" " "
1	Pottery cantina,	" " "
1	Pottery cup,	" " "
1	Pottery dipper,	" " "
2	Pottery jugs,	" " "
2	Pottery pitchers,	" " "
1	Pottery bowl,	New Mexico.
17	Pottery fragments,	near Madison, Wis.
1	Pottery jug,	" " "
1	Pottery pitcher,	" " "
3	Shell rings,	Apache Co., Ariz.
1	String of beads,	" " "
2	Stone arrow points,	" " "

ETHNOLOGY.

DONATIONS.

Baxter, George, Milwaukee.

1	Pistol, percussion cap system,	United States.

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Danforth, Ralph, Milwaukee.
1 Spanish cartridge, Philippines.
Docter, Adolph, Milwaukee.
1 Veterinary's chart, Germany.
Ellsworth, Wm. H., Milwaukee.
1 Bone of a Buffalo, pierced by an iron arrowpoint, North Dakota.
Hensel, August, Milwaukee.
1 Fragment of bomb-shell, Malate, Luzon, P. I.
Kiely, Paul P., Milwaukee.
1 Krag-Jorgensen rifle cartridge.
1 Springfield rifle cartridge, United States.
Kroll, F. W., Houghton, Mich.
1 Revolving breech-loading rifle, United States.
Luschan, Prof. von, Berlin, Germany.
2 Life masks of Laplanders, Germany.
Meinecke, Adolph, Milwaukee.
1 Hat, made of reed, Manila.
Pabst, G. G. Milwaukee.
1 Wood carving of native "Caraboa" cart, loaded with hemp and drawn by a Buffalo driven by a man, Island of Luzon, P. I.
Pauly, Emil, Sergeant Major, 8th Infantry, Ft. Columbus, Governor's Island, N. Y.
1 Native cannon, Province of Laguna, Luzon, P. I.
Smith, Amos A. L., Milwaukee.
1 An Act passed by the authorities of the City of Nashville, September, 1840, to regulate Slaves, Free Blacks and Mulattoes, Nashville, Tenn.
1 Proclamation of Major General Butler, issued at New Orleans, 1862, New Orleans, La.
Stewart, Miss Mary E., Milwaukee.
1 Small pouch of pemmican, made of reindeer meat, British America.
Stirn, August, Milwaukee.
1 Horn inkstand, 150 years old, Biedenkopf, Germany.
1 Inkstand, about 60 years old, U. S. A.
1 Panoramic woodcut of coronation procession of Queen Victoria, June, 1837, London, Eng.
Wilson, Mrs. Martin, Rio, Wis.
1 Knife scabbard, made by Bjorn Bonkholt in 1818. Tellemarken, Norway.
Wisconsin Natural History Society, Archaeological Section, Milwaukee.
1 Birch bark wrappings, taken from mound on Fox Island, Wis.

Digitized by Google

2	Bracelets,	taken from mound on Fox Island, Wis.
1	China saucer,	" " " " " " "
1	Cranium,	" " " " " " "
1	Dress ornament,	" " " " " " "
1	Gun flint,	" " " " " " "
1	Hammer stone,	" " " " " " "
1	Mirror,	" " " " " " "
1	Necklace,	" " " " " " "
2	Tin buckets,	" " " " " " "
2	" cups,	" " " " " " "

ACQUIRED BY EXCHANGE.

1 Facsimile of Aztec title of land given at Tulancingo, Mexico, in 1580, Chicago, Ill.
1 Map of Huauhtla. A Mazatec Indian painting, copy, Chicago, Ill.
1 Modeled head and bust of Eskimo, Washington, D. C.
1 Picture of Otomi woman beating paper from bark, Chicago, Ill.
1 Picture printed on bark paper from Mexico, Chicago, Ill.

ACQUIRED BY PURCHASE.

1 Chippewa chlorite pipe, inlaid with lead and catlinite, Wagaboon Dist., Ont.
1 Chippewa chlorite pipe, used by modern Indians, Wagaboon Dist., Ont.
1 Cigar lighter, "Zündmaschine."
1 Peruvian mummy, in sitting position, Peru.
1 Snake dancer's outfit, worn by "Luke" in Mushonnovi, A. T. snake dance, Aug. 21, 1901, consisting of:
2 Ankle bands (Honkokacmiata), Mushonnovi, A. T.
2 Armbands (Macmiata), "
1 Bandoleer (Totoriki), "
1 Buckskin fringe (Wowokwawa), "
1 Case containing feathers (Nakwa), "
1 Deerskin band (Hokacmi), "
1 Kilt (Chovitkuna), "
2 Moccasins (Totci), "
1 Sacred meal bag, "

NUNNEMACHER COLLECTION.

DONATIONS.

Nunnemacher, Herman, Milwaukee.
1 "Burrgo," veil, Egypt.

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Nunnemacher, Robert, Milwaukee.

1 Panama cigar case, made for the Vice-President of Chili, Guyaquil, Ecuador.

ACQUIRED BY PURCHASE.

1	Alabaster model of the Taj Mahal.	India.
1	Framed photograph of the Taj Mahal,	"
22	Arrows,	Solomon Isls.
2	Baskets,	Egypt.
4	Boomerangs,	Australia.
1	Bow,	Solomon Isls.
3	Brass vases,	British India.
1	Carved and painted mask,	New Ireland.
1	" " " "	New Britain.
2	" ebony elephants,	Ceylon.
1	" image, Singalese devil dancer.	India.
1	" lacquered pocket shrine,	Japan.
3	" masks,	"
1	" pocket shrine, "Gods of Good Fortune,"	"
1	" paddle,	Samoa.
1	" ".	New Guinea.
1	" wooden club,	Australia.
1	Dagger,	Armenia.
1	Fan,	Philippines,
1	Double-bladed dagger,	British India.
2	Framed Florentine mosaic pictures, representing cock and hen,	Italy.
1	Framed Roman mosaic, "The Colosseum,"	Italy.
1	Gilt wood image, taken from the imperial cremation car,	Bangkok, Siam.

GUNS.

1	Ballard carbine,	U. S. A.
1	Burnside "	"
1	Flint-lock gun, with damascened barrels,	India.
1	Gallager carbine,	U. S. A.
1	Hall rifle,	"
1	Joslin carbine,	"
1	Match-lock gun,	Japan.
1	Maynard carbine,	U. S. A.
1	Merrill	"
1	Muzzle-loading hunting rifle,	Germany.
1	Smith carbine,	U. S. A.
1	Springfield carbine,	"
1	Spanish blunderbuss, of 1810.	Spain.
1	Starr carbine,	U. S. A.

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REVOLVERS.

1	Brass revolver, 4 barrelled,	U. S. A.
1	Blunderbuss pistol, brought to Canada in 1812,	France.
2	Flint-lock pistols, with damascened barrels,	India.
1	"Luger" automatic pistol,	Germany.
1	Mauser pistol, Waffenfabrik Mauser, Oberndorf a. Neckar.	
1	Head of Egyptian mummy.	Egypt.
2	Iron spears,	Africa.
1	Ivory carving,	China.
3	" "	Japan.
1	" " representing an elephant and soldiers,	India.
1	Magic mirror,	Japan.
1	Mandarin's hat,	China.
1	" robe,	"
2	" shoes,	"
1	Miniature bronze horseman with complete armor, Paris Exposition of 1899.	
1	Morning star,	Germany.
5	Musical instruments,	China.
2	Pairs of castanets,	Spain.
1	Parang (sabre),	Borneo.
3	Peruvian bronze idols, taken from ancient graves of natives,	Peru, S. A.
1	Picture, showing Mexican feather work painting,	Mexico.
1	Porcelain plaque,	China.
1	Russian ikon (Madonna),	Russia.
1	Short sword,	Japan.
1	Suit of armor, reproduction of suit of Henry II,	France.
1	Sword,	British India.
1	Woman's skirt,	Fiji Islands.
44	Guns,	From the Museum's collections, mainly from the United States.
46	Pistols,	
29	Swords and bayonets,	

NUMISMATICS.

Donations not previously acknowledged.

(Many of the coins in this list were donated previous to the present year, but have not been acknowledged.

Baruch, Ella, Appleton, Wis.

1	Copper and 5 silver coins,	Siam and Japan.

Biersach, Adolph, Milwaukee.

11	Copper and silver coins,	Costa Rica and Nicaragua.
2	Five centavos token, copper,	Limon.

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Biersach, Hans, Milwaukee.
8 Copper and nickel coins, Various countries.
3 " tokens, Wisconsin.
Brown, Charles E., Milwaukee.
25 Copper and silver coins, Various countries.
19 " tokens, U. S. A.
Brown, T. D., Milwaukee.
1 Three pence, silver, 1845, Great Britain.
Chase, Geo. H., Milwaukee.
1 One hundred dollar note, Confederate States of America, Richmond, Va.
De Gelleke, Miss Clara, Milwaukee.
1 One kreuzer, copper, 1901, Germany.
Fernekes, Valentine, Milwaukee.
1 Ten centimes, silver, 1896, Netherlands.
Fidlin, John F., Milwaukee.
1 One cent, bronze, 1901, U. S. A.
Gronik, M., Milwaukee.
1 One heller, Austria.
Harlowe, David, Milwaukee.
4 Nickel coins, 1883, Mexico.
Juergens, Charles A., Milwaukee.
1 Five kopecks, copper, 1864, Russia.
1 Three pfennige, " 1869, Prussia.
Lindgren, Otto, Milwaukee.
2 Silver coins, Finland.
Lotz, Dr. Louis, Milwaukee.
22 Copper, silver and bronze coins, Various countries.
7 Copper tokens, Milwaukee, Wis.
Meinecke, Adolph, Milwaukee.
1 Groschen, Oldenburg.
23 Silver coins, Various countries.
86 War tokens, U. S. A.
Milwaukee Natural Science Association, Milwaukee.
3 Copper-nickel coins, France.
Nunnemacher, Mrs. Rudolph, Milwaukee.
2 Silver coins of Philippus I, M. Julius, A. D., 244, Rome.
8 Bronze coins of Ptolemy II, B. C. 222, Greece.
1 Silver coin, tetradrachm of Ptolemy VII, 229-100 B. C., Greek.
1 Silver coin, of Alexander II, 128-123 B. C., Syria.
Pereles, Herman, Milwaukee.
7 Copper and silver coins, Various countries.
2 Medals, U. S. A.
Porter, Mildred and Pierce, Milwaukee.
8 Copper coins, Various countries.

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Sandrock, Wm. F., Milwaukee.
2 Copper coins, 1863 and 1892, Ceylon and Sweden.
Sandrock, Wm. F., and H. Pereles, Milwaukee.
91 Copper, nickel and bronze coins, U. S. A.
5 Copper and bronze coins, Various countries.
Scharff, Walter, Milwaukee.
1 One cent, copper, 1882, Canada.
1 Three cents, silver, 1854, U. S. A.
Scherbarth, Master Harry, Milwaukee.
1 One cent and 1 five cent coin, Canada.
Stern, Jacob, Milwaukee.
1 Five cents scrip Bishop's General Store House, Salt Lake City, Utah.
Teller, Mrs. E. E., Milwaukee.
1 One dollar bill, 1849, Canada.
1 Five cent " 1862, Rochester, N. Y.
1 Colony of New York three pound bill, 1771, New York.
1 Continental one dollar bill, 1776, U. S. A.
Ward, Henry L., Milwaukee.
2 Copper coins, U. S. A.
Wheeler, Olive C., Milwaukee.
1 One cent, nickel, 1859, U. S. A.
4 " " bronze, "
Whitney, Lee R., Milwaukee.
1 One half penny, copper, 1884, Great Britain.
Wisconsin Natural History Society (Numismatic Section), Milwaukee.
3 Copper and silver coins, Various countries.

ACQUIRED BY PURCHASE.

9 Copper coins, Various countries.

ACQUIRED BY EXCHANGE.

52 Copper, silver and nickel coins, Various countries.

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ANNUAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

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OF THE

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SEPTEMBER 1, 1903 TO AUGUST 31, 1904.

OCTOBER 1, 1904

MILWAUKEE
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Report of the President of the Board of Trustees.

Milwaukee, Wis., Sept. 28, 1904.

To the Honorable the Common Council of the City of Milwaukee.

Gentlemen:—The Board of Trustees of the Public Museum of the City of Milwaukee herewith presents to you its twenty-second annual report as required by Section 8 of Chapter 328 of the Laws of Wisconsin for 1882.

The use of the museum by the public during the year has been gratifying. Our efforts in behalf of public education appear to be meeting with the approval of the people and our relations with the various kinds of schools, public as well as others, are becoming closer and more helpful to them.

The museum is becoming more widely and favorably known in other cities of the United States and abroad, a condition that cannot reflect other than credit on the broad-minded citizenship that has reared this institution of culture.

Its need of increased room in which to carry on its growing present activities as well as to enable us to add other features even more conducive to the liberal culture of the masses are continually being more urgently brought to our attention, and we must soon add to our space or cease to grow. During the year we were compelled to request the removal of an extensive loan collection occupying six cases in order to avoid the necessity of storing our own

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specimens, and in many other ways we have felt the restrictions of our limited space.

Repairs to the building and its lighting and heating plant have been more extensive and costly this year than heretofore, and will probably necessitate greater outlays from year to year in order to keep all in first class condition.

The inventory of the museum on Aug. 31, shows the present condition of the collections, and compared with previous ones, indicates a substantial growth.

Mineralogical and geological specimens	6,681
Palaeontological specimens	14,701
Botanical specimens	23,170
Zoölogical specimens	167.404
Archaeological specimens	20,340
Ethnological specimens	4,000
Arms, armor, carvings and other objects contained in the Rud. J. Nunnemacher collection	2,782
Coins, banknotes, medals, etc	3,154
Books, pamphlets, maps, etc	11,081
	253,313

The financial statement of the board for the year is as follows:

Balance in Museum fund Sept. 1, 1903	$10,102.44
Refunded from various sources	153.17
Appropriation to Museum fund, Jan. 1, 1904	25,716.93
	$35,972.54
Total expenditures during the year	25,309.80
Leaving a balance on Sept. 1, 1904, of	$10,662.74

More detailed information regarding both of these matters will be found in the Custodian's report.

We desire to express our thanks to the public and to the press for their appreciation of what we have striven to do for the city's museum.

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In concluding I desire to express my thanks to the members of the board who have devoted much of their valuable time in attending committee meetings and the monthly meetings of the board.

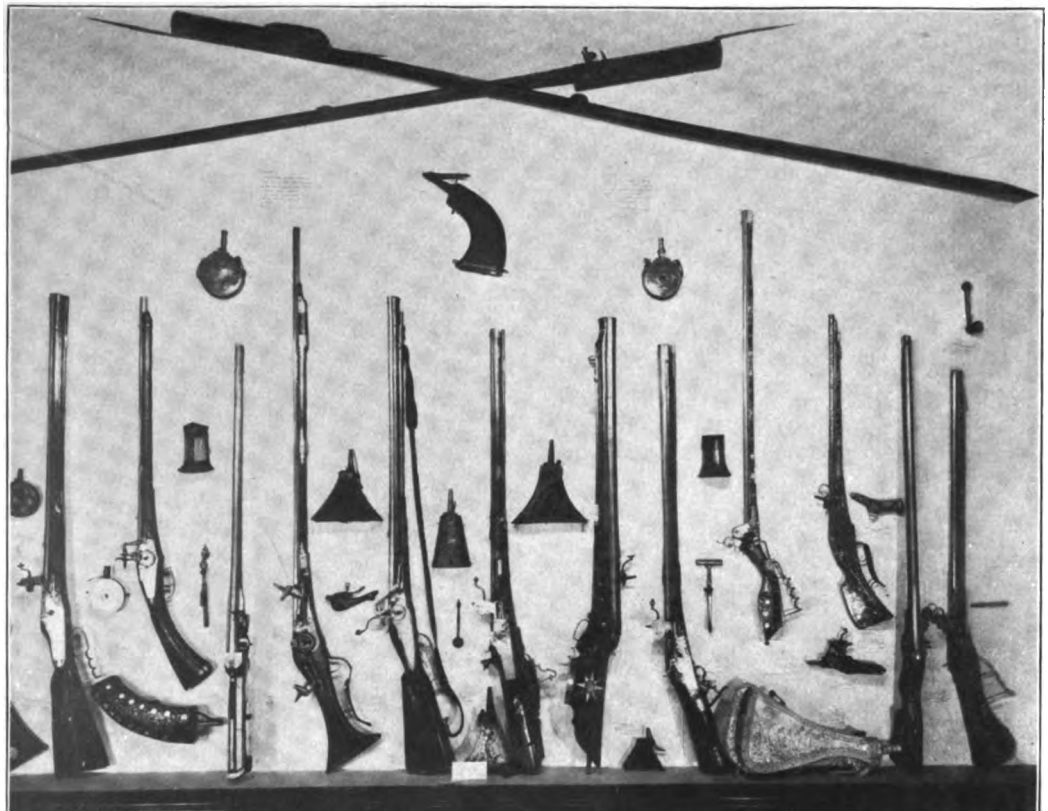
All of which is respectfully submitted.

E. W. WINDFELDER,

President Board of Trustees.

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PART OF A CASE OF WHEEL-LOCK GUNS FROM THE GUN SERIES OF THE NUNNEMACHER COLLECTION.

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REPORT OF THE CUSTODIAN

Gentlemen:—The twenty-second annual report of the custodian is herewith submitted in accordance with the rule governing this matter.

Although the past year has been one of considerable activity in which a number of things have been accomplished in a credible manner, there are so many other crying necessities of revision, rearrangement and relabeling of old exhibits and desirable new installations which at the beginning of the year it was hoped to have finished, but that are either uncompleted or not even begun, that it is with a feeling of dissatisfaction and regret that we are forced to close the account.

The necessity for one person to not only fill the position of director or custodian of the museum and secretary to your board, but also to act as curator (doing all the identifying, labeling and detailed planning for all work) of Mammals, Birds, Fossils, Minerals, Rocks, Archaeology and Ethnology, the varied objects grouped in the Nunnemacher collection and our historical collections, occasionally turning his hand to reptiles, batrachians and fishes, besides spending some considerable time in planning and aiding in the work in invertebrate zoölogy, does not allow of his doing his best in any one department, and is most certainly less satisfactory to the museum than would be the work of men educated along special lines and giving their entire attention to the subjects that they know best. The present arrangement also necessitates slighting or

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leaving entirely undone many things outside of the regular work that would materially enhance the usefulness of the institution, but for which sufficient time cannot be found.

As a snowball, rolled in sodden snow, materially increases its rate of accretion as it grows in diameter, so the collections of this museum have accelerated their rate of increase year by year, and our various other interests have likewise augmented and become more varied and far reaching, and consequently should be given more attention.

The preparator, attendant and janitor forces have been added to from time to time during the existence of the museum, but the scientific force, on which depends the true life—the very soul of the institution—has remained practically stationary. This is a subject that has been touched upon in previous reports, and is one that you gentlemen will undoubtedly take steps to remedy at such a time as it is possible to obtain an increase in our tax rate that will render feasible the employment of competent curators.

Milwaukee has just cause to be proud of her museum concerning which the custodian can speak without embarrassment, as he has been connected with it and has been a resident of the city only two and a half years. There is only one other museum in America in which a general view of the exhibition halls and their furnishings can compare in impressiveness and beauty with our own; and considering only the exhibition, and not the study collection, this museum ranks sixth in size of all those on the North American continent. It is *facile princeps* the largest strictly municipal museum in America, perhaps in the world. The museum is doing much in an educational line for the city; in fact, there are but few others in this coun-

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try that are doing as much; but what is being done is an exceedingly small part of that which might be accomplished, were we properly provided with a curatorial force, more exhibition room, and a suitable auditorium.

The leavening effects of scientific thought and methods have in the last few decades permeated all classes and revolutionized human thought and methods. The study of animal and plant life that a few score years ago was popularly supposed to be the useless fad of a few impractical men, is now quite generally recognized to be of immense pecuniary value. It has been estimated that the Mexican cotton boll weevil was annually destroying $15,000,000 worth of cotton in the United States, and might turn the balance of trade of the world by obliterating our cotton industries. The government scientists have already done much to preserve this threatened industry, and are hopeful of suppressing the pest as they have done in the cases of various other noxious insects. Most modern industries are largely or entirely dependent on science; and the monetary value (which is that appealing most strongly to the average citizen) of its discoveries, are almost beyond calculation. While it is not proposed to make this institution a great producer of municipal or national wealth in scientific discoveries, yet it can well be a distributing center for Milwaukee and the state of useful and valuable information, and above all make common property of fundamental principles and incite an interest in things that will tend toward broader mental horizons and more useful and valuable citizenship. The possibilities of the museum as an educational factor along these lines is limited only by the ability of its employes, its budget and the aptitude and desire of the people to benefit by it.

The present educational features of the museum are by no means contemptible, though but a weak forecast of

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what we hope they will become in the future. Our relations with the schools have been uniformally cordial. Although to our surprise there has been a hesitancy exhibited on the part of some teachers about bringing large classes to the museum without first obtaining permission, we have striven to disseminate the information that they are particularly welcome, and that while we do not desire unnecessary noise that may disturb others, yet we are glad to submit to any moderate commotion that an interested class may make. Many classes from normal, public, parochial and suburban schools have come to the museum to study, and it would be interesting to know the number that have made such use of the collections, but the data is unobtainable. On several occasions it has been noticed that two and even more classes were simultaneously in the halls.

Last years' report stated that: "During the past year the specimens loaned to the schools equaled those furnished them in the thirty-six months immediately preceding." It is a satisfaction to be able to state that the distribution of loan collections, consisting of mounted mammals, birds, butterflies and moths, archaeological collections and collections of minerals and rocks, has been more than two and a half times as great the present year as it was last. The rate of increase will undoubtedly diminish in the future as it has in the present year, although we expect that the number of specimens and collections loaned will steadily increase for some years to come. Many more would have been distributed had we succeeded in all cases in reaching the teachers with the circular of information listing the loan specimens and collections. As many copies of this list were mailed each school principal as there were rooms in his school, and the printed request was made that a copy be posted in each school room. The peculiarities of some pedagogical minds are such that to our certain knowledge

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NORMAL SCHOOL CLASS AT AN ARCHAEOLOGICAL LECTURE BY THE CUSTODIAN.

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various principals posted none of these notices, and presumably distributed none; for many teachers applied for objects that we do not have for loan or inquired in a deprecatory way whether we ever loaned anything to the schools and disclaimed ever having seen the lists. The teachers seem to value the specimens, and most of the principals appear to be alive to the interests of their schools in this matter, and we are in hopes that a larger proportion will facilitate the work the coming school sessions.

During the year we have added to the loan collections five species of small mammals, largely increased the number of specimens of several of the more called for species of birds, and entirely revised the archaeological collection so that it now gives a better idea of the mode of life of the Indians of this region prior to their intercourse with the whites. The latter part of the school year we were quite unable to supply the unprecedented demands made upon us for loan specimens, and had our supply been larger we would have greatly increased the distribution. Fifty-eight schools, including high, grammar, private and parochial schools, were borrowers. There is no question but that this kind of museum extension is beneficial to the community in spreading, in some slight degree, an interest for natural history among its many thousands of school children.

The school room in the museum, that we maintain and equip with illustrative specimens, and where some twenty thousand school children last year received an hours' instruction by the museum lecturer employed by the school board, is unquestionably a strong factor in disseminating ideas of nature presented in a more comprehensible and systematic manner than it is possible to do by exhibition alone. Some four hundred classes from the fourth to the seventh grades came to this school room at certain fixed times during the year to listen to stated lectures on sub-

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jects correlated with their school work. The schedule of these classes is made by the superintendent of schools' office so that there can be no interference of time, nor lack of knowledge by the numerous class teachers of when they are expected or what the subject is to be. Three classes a day come during most of the year, and at certain times the lecturer visits the schools transporting a few specimens for the lectures given there. Indian customs and animals of North America, manners and customs of South America, and human and other skeletons illustrating physiology were the subjects treated last year by the lecturer.

Several teachers from the Normal school located here have brought their classes and utilized our collections for more advanced work than the graded schools are capable of. The custodian has lectured to normal school classes on archaeological subjects during the past two years, and although on one occasion this year he unwittingly exceeded the proprieties by failing to look at his watch and talking continuously for an hour and fifty minutes, yet such was the forbearance and enthusiasm of the class that they again risked themselves in his hands. This epitome of our educational work embraces the more tangible part of it; but it is probable that a respectable percentage of our casual visitors find useful information in the various collections and their labels. As rapidly as possible we are revising the labeling of the various collections so that they shall tell more of interest concerning either individual specimens or groups of specimens. We have striven to give some hint of such scientific conceptions as the arrangement of the collections either does not touch upon or not in a manner calculated to impress itself upon the casual visitor. Thus the matter of geographical distribution is one that our arrangement does not emphasize, and so we have introduced a globe with the land areas differentially colored and lettered

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to show the various life regions of the world, and have constructed colored charts of North America showing the biological areas or zones into which it is divided. Exhibits of this nature are, from lack of room, necessarily superficial, but it is hoped that they will prove suggestive to many visitors who otherwise might have no conception of the foundations upon which natural history knowledge is reared.

During the year we have answered many requests, verbal and written, for information concerning natural history subjects. Many of these have been economic in character, while others have been purely scientific. We have given advice to three libraries in the state who have the intention of founding museum departments; visiting one of them to study conditions of lighting, etc., in order to determine the style of cases most appropriate for them. In this connection it may be noted that our sharing of this building with the public library while beneficial in several ways, subjects us to the suspicion of being a department of it instead of a separate and distinct institution. Our correspondence showed that the three libraries above mentioned so considered us, and we have almost daily to correct the ideas of some one in this matter. The implication is unfortunate, because of the recognized lack of standing of such museums in this country that might re-act on our correspondents very unfavorably to us were the impression to become general that we were in anyway under the control of or linked to a library.

A number of professional naturalists have from time to time during the year made use of the museum's library and collections. Several artists have sketched and painted in the museum both for art and commercial work. One public lecture was given during the year. Rev. C. B. Antisdel, recently returned from a five years' residence in the Congo,

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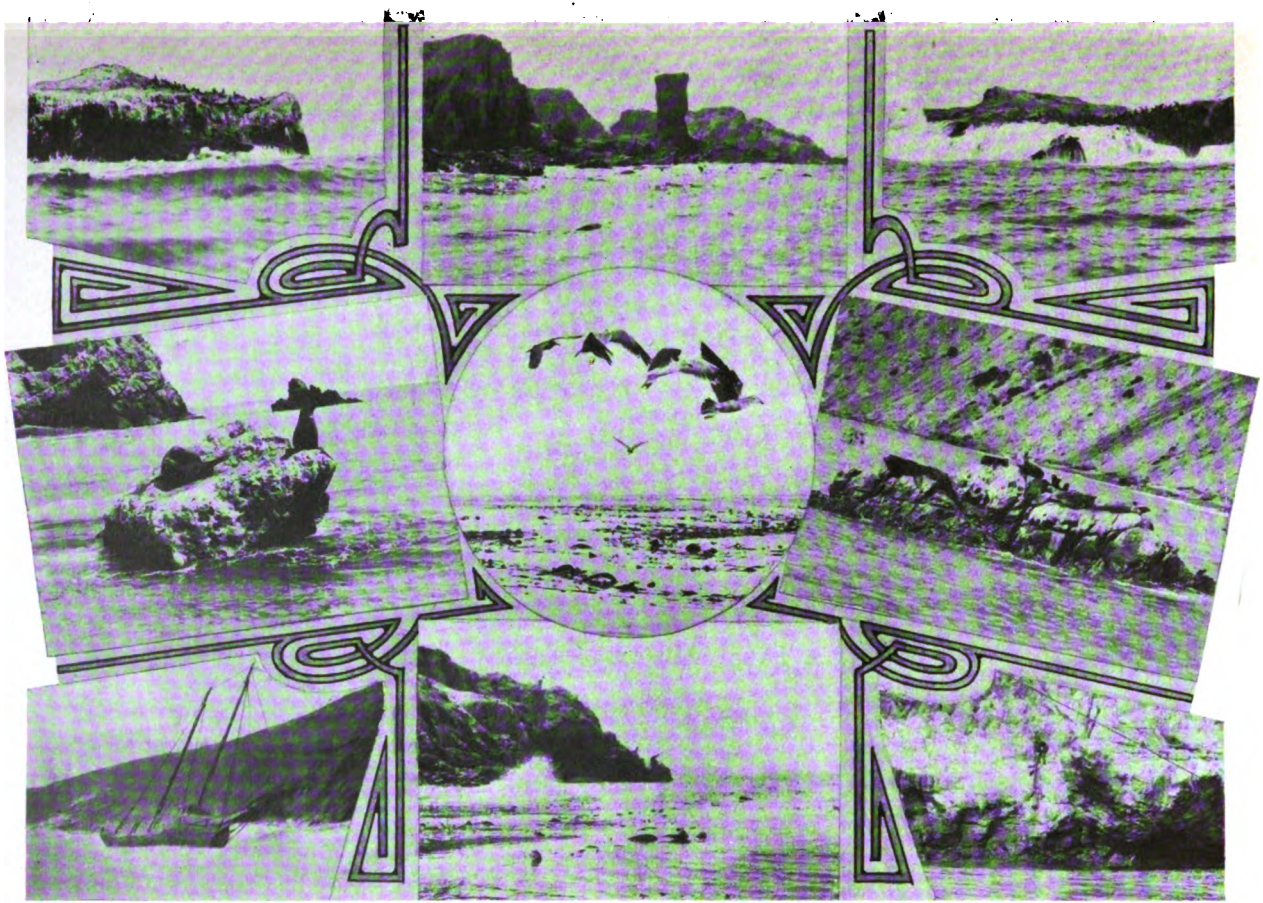
and brought back many ethnological specimens, of which the museum secured a fine series. Mr. Antisdel kindly consented to deliver a stereopticon lecture on the Congo negro, which was farther illustrated by the actual specimens secured. The lecture unquestionably made this particular collection of far greater interest to his auditors than it would otherwise have been. We are anxiously looking forward to the time when we will be in position to make such lectures a regular part of the museum work.

The board room has, as heretofore, been loaned to the Wisconsin Natural History Society, the Wisconsin Mycological Society, the Wisconsin Archaeological Society and the Milwaukee County Medical Society, for their regular sessions. The Northern Wisconsin Library Association also held one of its meetings here. The unfitness of this room for large gatherings and the desirability of securing a suitable auditorium was outlined in the last annual report, and conditions have not altered since then.

The attendance at the museum has been satisfactory, though variable. Many times the halls have been fairly crowded, while at others but few people were to be seen. Our exhibit of radium furnished the only gauge by which we could judge of the number. During the first five weeks of this exhibit and omitting one Sunday when the crowd was so great that the attendant gave up in despair keeping count of those admitted to the dark room, a total of thirty-two days, of which ten were only afternoons, 2,762 people were shown this exhibit. This represents only a small proportion of the visitors to the museum during that period.

This year the museum has done more collecting than formerly, mainly restricted to two trips. An expedition to the Pacific Coast in quest of material for sea lion groups was made by the custodian in September and October.

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1-3 STELLER'S SEA LIONS AT RICHARDSON'S ROCK.
2-8 CALIFORNIA SEA LIONS AT GULL ISLAND.
4-6 CALIFORNIA SEA LIONS AT SANTA CATALINA ISLAND.
5 WESTERN GULLS AT GULL ISLAND.
7 WRECK AT SAN MIGUEL ISLAND.
9 LANDING SEA LION SKIN AT FLEA ISLAND.

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This resulted in nine skins of the California Sea Lion, four skins of the Steller's Sea Lion, twelve other mammals, six birds, sixty-six insects, one hundred and thirty-three shells, thirteen other invertebrates, one Indian skeleton, sixty-six fossils, one hundred and one plants, twenty-five minerals and rocks, besides a series of several dozen photographs and other useful data, and the examination and purchase of many zoological and ethnological specimens. The small number of specimens collected other than the sea lions was due to lack of time to attend to other matters when on the seal rookeries, and because of the birds being in moult.

In June the custodian, Mr. Shrosbree and Mr. Clowes, visited various parts of Oconto county, in search of material for groups of nesting birds and data for reproducing the same with strict fidelity to nature. This expedition resulted in much valuable material, consisting of one hundred and fourteen adult and immature bird skins, ninety-one nestlings, one set of eggs and seventeen nests, thirty-three mammal skins, three nests of mammals, seventy-one shells, a large number of plants prepared for moulding, and photographs and notes requisite to faithfully reproduce the environments of these bird and mammal homes. During this trip we were, as was the case last year, accompanied and most efficiently assisted by Mr. A. J. Schoenebeck, whose guests we were during that part of the time spent at Kelley Brook. Our thanks are also due to Mr. John Gross of Little Suamico, who this season as last put at our disposal and accompanied us on his commodious and powerful naphtha launch, by means of which we expeditiously visited various islands in Green Bay.

Other shorter collecting trips were made, bringing to the museum many specimens of value that could not have been obtained otherwise. The necessity of the almost

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daily presence of the custodian has rendered inadvisable other trips that would unquestionably have been highly advantageous to the museum.

The growth and alterations of the collections in the past year has been as follows in the various departments:

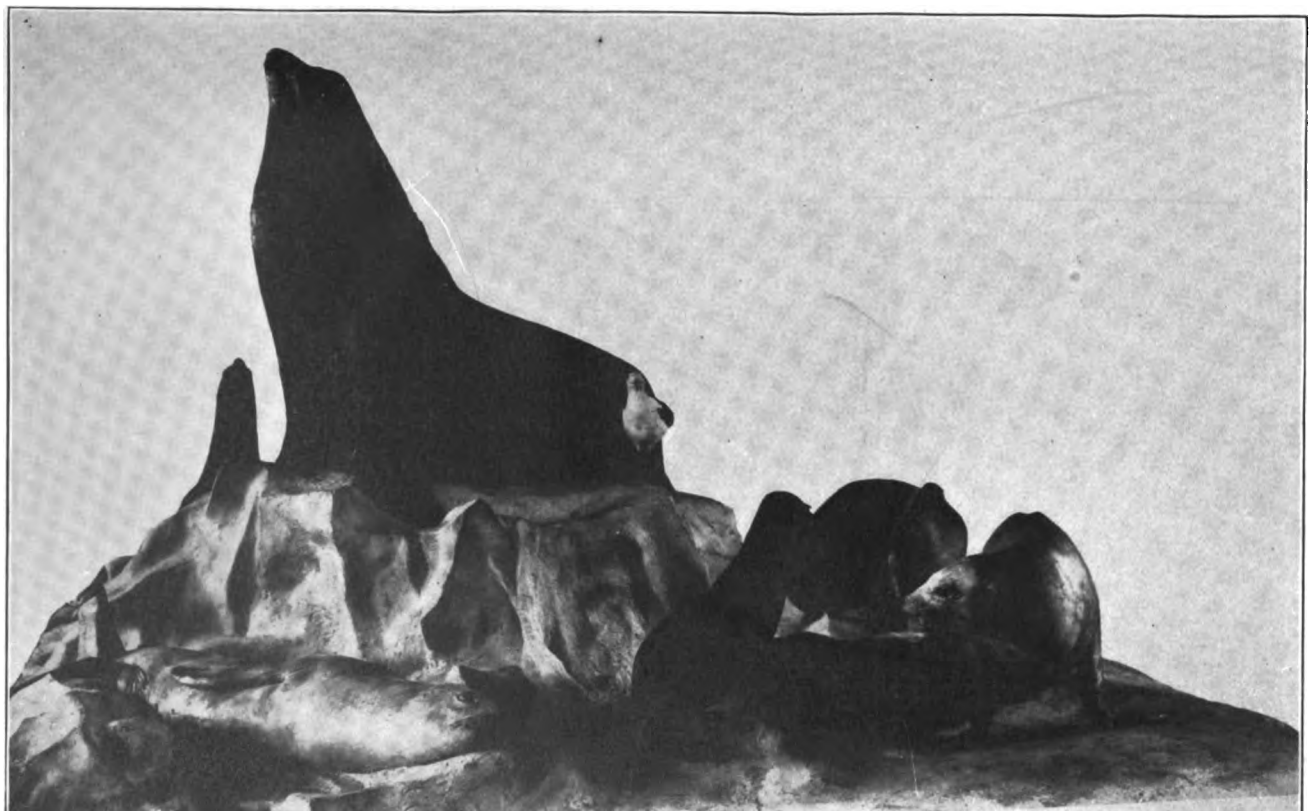
ANTHROPOLOGY.

But little has been done toward the much needed rearrangement of our archaeological and ethnological collections because of the inability of the custodian to devote the necessary time to the work. Some of the cases containing these collections are very badly crowded and their contents must be partially stored in order to permit of an effective arrangement and display of the balance. There is no room in which to place new cases to hold the overflow.

For some years we have had on deposit a valuable collection of French paleoliths brought together mainly by personally conducted excavations made by Mr. C. H. Doerflinger many years ago in these celebrated caves whence come some of the earliest records of man's existence. During the year the Museum purchased part and Mr. Doerflinger donated the balance of the collection. The purchase of the Antisdel Congo collection of ethnological objects previously alluded to was also a material addition. Several minor purchases have been made and numerous donations received, the most extensive of the latter being a series of Korean brasses received from Miss Elizabeth Plankinton. In previous reports for some years back have been noted several donations by R. L. Porter. These were donated with the understanding on his part that they were to be kept together. As this arrangement was very undesirable to the Museum, Mr. Porter has, with your sanction, removed his donations.

The ethnological inventory although increased during

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GROUP OF CALIFORNIA SEA LIONS

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the year by 416 specimens, is little larger than the figures given last year because of previous omissions to subtract a collection of 373 tools that were entirely out of place in the Museum and were given back to the donor some two years ago.

During the year 160 Archaeological specimens were received by donation, 1,196 by purchase, 4 by collection, and 1 in exchange.

41 Ethnological specimens were donated and 375 purchased.

MAMMALS.

Starting the year with a total of 845 mammals, the number has been raised to 1317. We have made special efforts to do this as it has been apparent that we were disproportionally weak in this very important department. The available skins for comparison and study have been so few as to be of little use in this direction. While the series now on hand is very inadequate, yet it is a material beginning on what it is hoped will in a few years become a satisfactory working series of skins of North American mammals. The larger part of the addition was by the purchase of three lots from the original collectors. The regions embraced in these collections are mainly Wisconsin, the state of Veracruz, Mexico and California and Arizona. The additions range as follows: purchased 349 specimens, collected 72 specimens, donated 51 specimens.

During the year there has been added to the exhibition series two groups eleven feet square, one of Elk consisting of male, female and yearling, the other of California Sea Lions containing male, three females and five young; and three small groups of Mink, Fox Squirrels and Greenland Hare. The mounting of these mammals as well as of various single specimens added to the collections was done by Mr.

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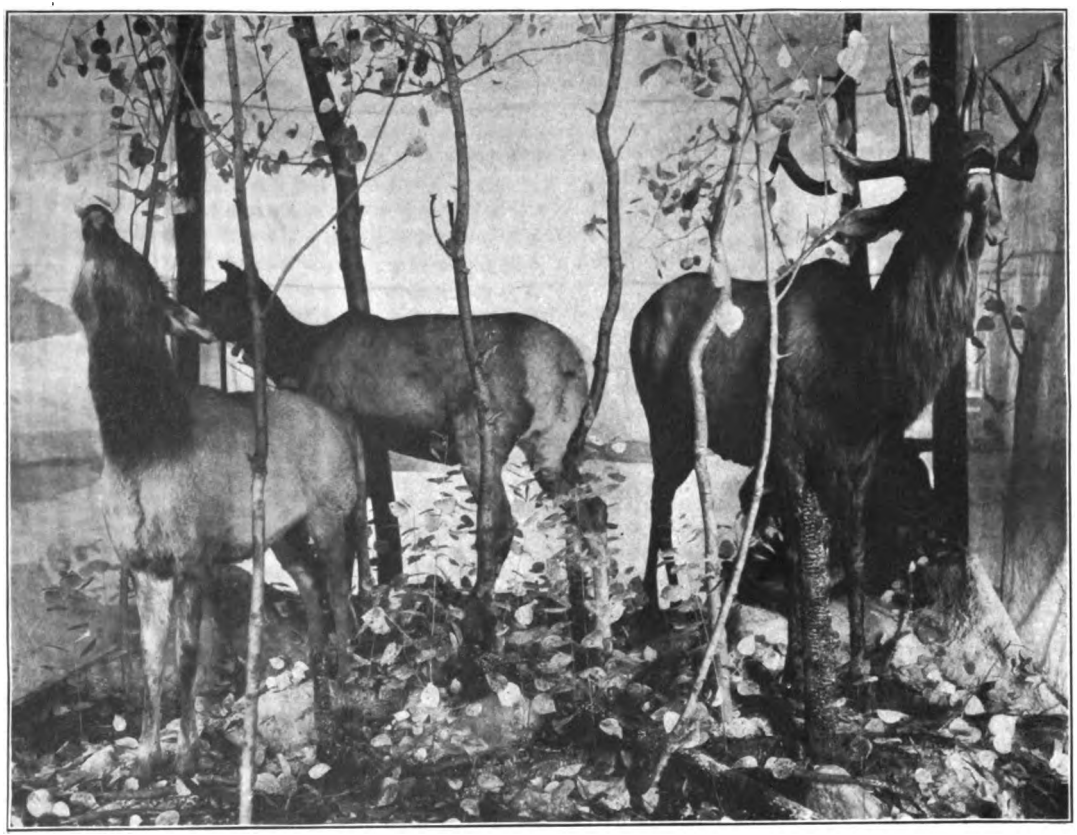
Brandler. The accessories of all except the sea lions were made and arranged by Mr. Clowes.

Groups of Virginia Deer, Black Bear, Badger and Porcupine, were loaned to the State Forestry Commission as part of their exhibit at the Louisiana Purchase Exposition and were packed and set up at the Exposition by Mr. Shrosbree. The mammals for the school loan collection were mounted by Mr. Rohde.

BIRDS.

Five hundred and fifteen specimens of birds have been added during the year of which 275 were by collection, 37 by purchase and 203 by donation. Groups of Catbird, Nighthawk and Killdeer showing both parents and young were mounted by Mr. Shrosbree and the accessories added by Mr. Clowes. These groups of nesting birds are among the most attractive objects in the Museum; for portraying, as they do, the home life of these creatures, they have a human comparison giving them a peculiar interest to the average observer who translates nature anthropomorphically. The North American series has also been materially added to. Three cases of this series have been gone over, the poorer specimens replaced by new mounts, many omissions filled, all cleaned and mounted on cherry pedestals, the identifications proved, the nomenclature revised to date and new labels printed on our press. It has been considered advisable to add the geographical distribution to the labels in order to obviate the misidentification for our local birds of more or less closely allied species resident only in other parts of North America; a mistake that has frequently been made in the past by visitors. A group of Song Sparrows illustrating evolution by climate has also been prepared and put on exhibition with a suitable descriptive label. Our collection of local birds, with its changing arrangement so as

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GROUP OF WAPITI OR ELK

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to show the relative position of each bird to the Milwaukee region at all times of the year, continues to be of great interest to bird students. All of the taxidermic work on birds has been executed by Mr. Shrosbree except specimens for the school loan collections which were largely done by Mr. Rohde.

REPTILES AND BATRACHIANS.

But little has been done in this department other than the acquisition by purchase of a collection of about 160 specimens, mostly turtle skins in brine and lizards in formaline, from the state of Veracruz, Mexico.

FISHES.

Various specimens previously acquired have been mounted in formaline and alcohol and placed on exhibition. Sixty-eight moulds of fishes have been received by donation from the United States National Museum.

MOLLUSKS.

One thousand six hundred and thirty-six specimens have been added in this department of which 2 were by purchase, 808 by collection, 287 by exchange and 539 by donation. Many labels have been printed and added to the collection, a series of drawings of dissections, parts, expanded animals, etc., and a number of special preparations showing anatomical features calculated to elucidate the subject, have been introduced in their appropriate places in the series A collection of local shells that have long been in the hands of Mr. Chadwick for study have been mostly returned, mounted and placed on exhibition. The drawings as well as most of the work above mentioned in this department has been executed by Miss Wheeler. Our thanks are due to Prof. Pilsbry of the Philadelphia Academy of Sciences for

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the determination of a portion of the particular Wheatley collection of fluvatile shells owned by the Museum. Another portion of this collection, embracing shells for which the literature is very meager, has since been sent to him for identification.

INSECTS.

The additions for the year are 1,501 specimens, of which 206 were by exchange, 699 by collection and 596 by donation. A single new exhibit has been made, that of a species of butterfly whose range extends across the North American continent and develops different geographical races where subjected to different environments. The specimens, both male and female, are pinned to a map, each subspecies occupying that part of the map representing the portion of the continent occupied by it in nature. A label calls attention to the environmental evolution and the causes thereof. The map and the installation of the exhibit is the work of Miss Wheeler.

For several years work has almost continuously been going on in pinning and arranging our study collection of insects. Mr. Brown reports that he has nearly completed this work. As in the past we have taken much advantage of the kindness of competent entomologists to determine our insects for us. Relationships of this nature should be reciprocal in order to be satisfactory to both parties and we are beginning to notice that our correspondents when called upon are frequently too busy to undertake this labor of love. The dictum "The Lord helps those who help themselves" is probably applicable to the present case and it is urgently hoped that we may soon be able to secure a curator in this department.

OTHER INVERTEBRATES.

But slight changes have been made in any of these collections except corals. These were in very poor shape and

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Miss Wheeler undertook the tentative determination of the stony corals, labels were printed for them and the specimens were cleaned and rearranged. The additions to the collections in this department during the year total 14, of which 13 were by collection and 1 by donation.

PALAEONTOLOGY.

The anomaly of part of the fossil mammals being on the first floor while the balance of them were in the regular palaeontological series on the third has been largely remedied by taking apart, removing to the upper hall and remounting the cast of the Megatherium skeleton, cast of the Mastodon head, casts of restorations of Ichthyosaurus and Plesiosaurus, and an actual tusk of the mammoth. Seventy-eight specimens have been added of which 2 were by purchase, 66 by collection and 10 by donation.

BOTANY.

The principal work in the herbarium has been done by Miss Nehrling's mounting and transcribing rough labels of plants of the Sylvester and other collections not previously so treated.

Various fungi have been sent to specialists for identification and a few additions have been made to our exhibit of local mushrooms which may be considered a fairly complete series of those occurring in this neighborhood. Mr. Brown has preserved and prepared these. Our thanks are due to Dr. R. A. Harper of Madison, Wis., Professors W. A. Kellerman of Columbus, Ohio, C. G. Lloyd of Cincinnati, Ohio, and C. H. Peck of Albany, N. Y., for identifications. Three hundred and nineteen botanical specimens have been added to the collections of which 106 were by collection, 117 by exchange and 96 by donation.

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MINERALOGY AND GEOLOGY.

In this department 208 specimens have been added of which 3 were by purchase, 24 by collection and 181 by donation.

Our exhibition of the radio-active properties of Radium bromide, by means of the spintharioscope, has been very popular. So much has been written in the daily press, mostly sensational and false, that Mr. Eichfeld, who conducts the exhibit, has occupied the ten to fifteen minutes' wait in the dark room necessary to prepare the eyes to see it in disseminating a general idea of the known facts. At times it has been impossible to accommodate more than a small proportion of those wishing to see it, although we have admitted parties of as many as eighteen persons in as rapid succession as possible.

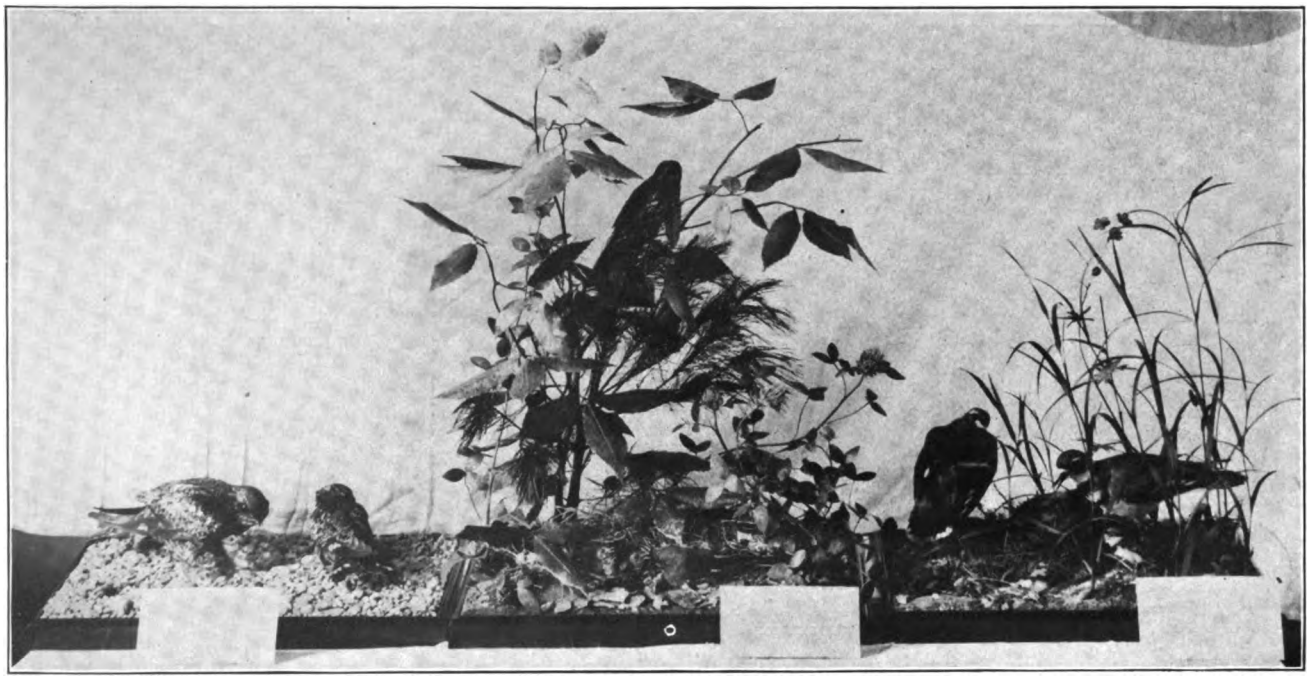
COIN COLLECTION.

During the year we have received two valuable gifts, one a collection of 507 coins of many countries left to the museum by the will of the late Rev. W. I. Grutza, the other a nearly complete series of United States silver and nickel coins donated by Mr. John H. Tesch. This consists of 385 coins, many of them uncirculated and nearly all in prime condition.

Although a contract was let in March for a new case to hold the entire coin, bank note and medal collection, and at the same time for a case for meteorites, labor difficulties in the factory receiving the contract, interferred with the execution of the work and the cases have not yet been delivered.

The long time that has elapsed since the receipt of these important donations without our being able to place them on exhibition, has been a matter of much chagrin to us. What work has been done on the coins the present year has

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NIGHTHAWK TOWHEE KILLDEER

GROUPS OF WISCONSIN BIRDS WITH NESTS AND YOUNG.

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been done by Mr. Brickner. The total additions are 908, of which 907 are by donation and 1 by purchase.

NUNNEMACHER COLLECTION.

A number of purchases have been made from the fund left for the increase of this collection, chief among which is a very representative collection of west coast basketry particularly strong in the baskets of the California Indians.

The more difficult part of the gun collection embracing the hand cannon, match-locks, wheel-locks, air guns and flint-locks, have now been cleaned, repaired and placed in the new cases. The long and tedious work of putting these into condition for satisfactory exhibition and preservation has been done by Mr. Shrosbree assisted by Mr. Eichfeld. Miss Wheeler has made various drawings which with the explanatory labels serve to make more interesting this rich series which now attracts much attention, whereas formerly it received but passing notice. The space formerly occupied by the guns will no more than accommodate the purchases not yet put on exhibition and so will do nothing towards relieving the badly congested state of the Nunnemacher collection which could advantageously occupy three times the space now allotted to it.

The preceding account will give you a general idea to the present status of the various collections in the museum and the work that has been done upon them and the additions made thereto during the year ending Aug. 31st.

THE LIBRARY.

Books are the necessary tools of the naturalist and museum men must make constant use of them. The cost of a practical working library is very great and the amount that

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could be expended in this line during the year was small, consequently only such works were purchased as appeared to be of immediate utility.

Our exchange list has been materially increased by the addition to it of several important scientific societies whose publications are of much value.

It is gratifying to note that the largest museum in America during the year decided to make us one of the limited number of repositories for its complete series of publications.

Were the museum itself a publisher of scientific contributions it could still farther increase the working value of its library by securing exchanges with other institutions who desire a more even exchange than is furnished by our Annual Reports and the Bulletins of the Wisconsin Natural History Society.

Since the last annual report 758 books and pamphlets have been added, of which 76 were by purchase and 692 by donation and exchange.

Mr. Thal has made considerable headway in cataloging the library so as to make more accessible the scattered articles on many subjects published in a large number of proceedings.

The use of the library by people not connected with the museum is less than we would wish for, but this seems to be gradually improving, and the last year has seen it and the collections used by more professional naturalists than heretofore.

BUILDING AND EQUIPMENT.

The length of time that the building has been in use has resulted in an augmentation of the amount necessary for repairs and renewal of equipment. All outside metal and woodwork has been painted, the air washing apparatus al-

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tered and repaired, several new electric circuits added, engines put into good condition, and in other ways effort has been made to conserve the highest efficiency of the plant.

Mr. Brickner having proved his ability to print labels more advantageously than we could have them done outside of the building, a first class 8x12 press and new fonts of type were purchased. This has been a great advantage in expediting work, and the quality of it is also improved.

Some slight improvements have been made in the taxidermic and carpenter rooms in the basement, but these are far from satisfactory, and it is very desirable that they may be changed by the addition of another wing to the building.

In the last annual report attention was called to the inadvisability of receiving small donations and collections under restrictions as to their exhibition. During the year some of these difficulties have been met and disposed of in a manner entirely satisfactory to the museum. By your sanction the following form of donation blank was prepared and donors of collections and of some single objects since its adoption have signed it:

Milwaukee, Wis.,.....19....

To the Board of Trustees of the Public Museum of the City of Milwaukee.

Gentlemen:—I hereby give, without reservation of any kind, to the Public Museum of the City of Milwaukee.....

.....

to have and do with as the board of trustees may see fit, and I voluntarily relinquish forever all control over the same.

.....

There seems to be no possibility of a misunderstanding as to the museum's powers to display or dispose of such collections as it may see fit; nor has there been noticed any diminution in the donations received subsequent to this ruling.

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The board room has been farther embellished by the addition of a portrait of himself presented by the former president of the board, Dr. E. W. Bartlett.

The thanks of the museum are due to the press of the city for their kindly interest in keeping the public informed of the various new exhibits from time to time put upon display; to the United States Department of Labor and Commerce, and the fish and game wardens of Wisconsin and of California in extending the courtesies of their offices in facilitating collecting of birds and mammals for the museum; to the chief of police of this city for similar courtesies and to the president of The Milwaukee Electric Railway and Light Co. for the free transportation, during several days, of specimens from a suburban point to the city.

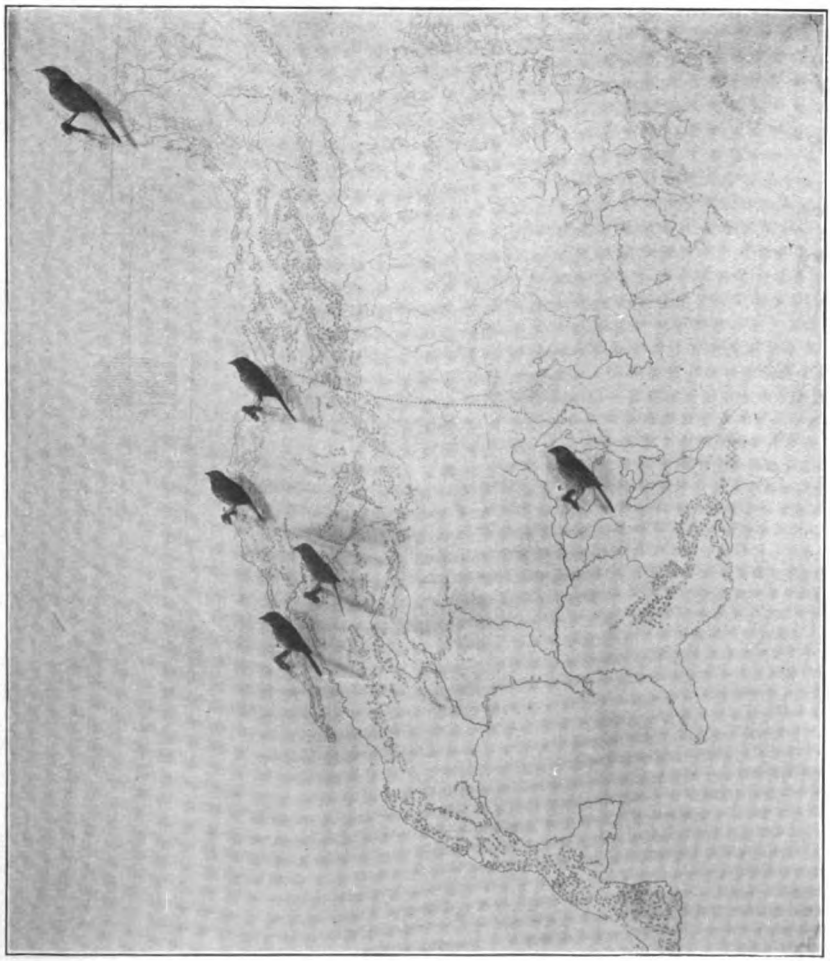
In closing I wish to thank you for your courtesy and the confidence you have shown in my administration of the affairs of the museum. I wish also to express my appreciation of the interest that has been shown by my co-workers of the museum force in the building up and elaboration of the collections.

Respectfully submitted,

HENRY L. WARD,

Custodian.

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EVOLUTION BY ENVIRONMENT.

GEOGRAPHICAL VARIETIES OF THE SONG SPARROW

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INVENTORY.

6,681	Mineralogical and geological specimens.
14,701	Palaeontological specimens.
23,170	Botanical specimens.
814	Protozoans, sponges, corals, echinoderms, etc.
93,995	Mollusks.
55,817	Insects (estimate).
284	Crustaceans.
382	Fishes.
1,068	Batrachians and reptiles.
7,580	Birds.
6,147	Birds' eggs and nests.
1,317	Mammals.
20,340	Archaeological specimens.
4,000	Ethnological specimens.
2,782	Arms, armors, carvings and other objects of virtu, contained in the Rudolph J. Nunnemacher collection.
3,154	Coins, bank notes, medals, etc.
11,081	Books, pamphlets, maps, etc.
253,313	Total number of specimens.

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FINANCIAL STATEMENT OF THE MUSEUM.

Debit.

Balance in Museum fund, Sept. 1, 1903		$10,102 44
Refunded from various sources		153 17
Appropriation to Museum fund, Jan. 1, 1904		25,716 93
		$35,972 54

Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:		
Anthropology and ethnology	$1,179 92	
Birds	34 70	
Botany	8 75	
Building repairs	194 50	
Cleaning supplies	122 30	
Fishes and reptiles	38 50	
Fossils and casts	4 50	
Furniture	1,072 96	
Gas (Museum)	9 52	
Insurance	37 70	
Invertebrates	23 13	
Library	255 72	
Mammals	417 14	
Minerals and rocks	27 38	
Miscellanies	76 02	
Payroll	16,941 28	
Permanent improvements	74 82	
Postage and freight	245 94	
Power department (fuel)	2,206 44	
Power department (gas)	20 92	
Power department (improvements)	212 00	
Power department (material)	253 59	
Power department (repairs)	348 72	
Preparation supplies	272 16	
Stationery and printing	368 36	
Telephone	72 00	
Traveling expenditures	417 39	
Wages	285 61	
Water	87 83	
		25,309 80
Balance in Museum fund Sept. 1, 1904		$10,662 74

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FINANCIAL STATEMENT OF THE RUD. J. NUNNEMACHER FUND.

Debit.

Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1903	$425 28
Paid over to city treasurer by the Rud. J. Nunnemacher estate, Nov. 12, 1903	500 00
Annual interest on $7,500.00 at 5 per cent. from Feb. 1, 1903, to Feb. 1, 1904	346 00
Paid over to city treasurer by the Rud. J. Nunnemacher estate, April 23, 1904	1,015 69
	$2,286 97

Credit.

Amounts paid by warrants on the city treasurer since last annual statement was rendered	1,168 39
Balance of Rud. J. Nunnemacher fund in the city treasury, Sept. 1, 1904	$1,118 58

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LIST OF INSURANCE.

Fire Association of Philadelphia	$2,000 00
Home Insurance Co., New York	7,000 00
National Union Fire Insurance Co., of Pittsburgh	2,000 00
Orient Insurance Co., Hartford, Conn	1,500 00
Phenix Insurance Co., of Brooklyn, N. Y	2,000 00
Sun Insurance Office, of London, England	1,500 00
The Concordia Fire Insurance Co., of Milwaukee, Wis	4,500 00
The Germania Fire Insurance Co., Pittsburgh, Pa	2,500 00
The Spring Garden Insurance Co., Philadelphia	2,000 00
Total	$25,000 00

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APPENDIX

ACCESSIONS TO THE MUSEUM AND ITS LIBRARY

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Donors are citizens of Milwaukee unless otherwise noted, and where no localities to specimens are given, the State of Wisconsin is to be understood.

ZOOLOGY.

Donations.

Aschermann, A. F.

3	Finches,	Africa.
1	Red-breasted Robin,	Germany.
1	Weaver-bird,	Madagascar.

Bacon, E. N.

1	Newt,	

Baecher, Alfred.

1	Golden-crowned Kinglet.	

Birst, Miss Catherine.

1	Belted Kingfisher.	

Bossert, Miss C.

1	Golden-crowned Kinglet.	

Brader, I. G.

1	Cockroach.	

Brandler, Chas.

1	American Bittern,	
1	American Sparrow Hawk,	
1	Black and White Warbler,	
1	Black-crowned Night Heron,	
1	Chimney Swift's nest,	
1	Red-headed Woodpecker,	
1	Ruffed Grouse, young.	
1	Spotted Sandpiper,	
2	Striped Gophers.	

Breitkreutz & Goldsmith.

1	Cacomistle,	Texas?
1	Capybara,	South America.

Brotch, E.

1	Boa constrictor, young,	Tropical America.

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Brown, Abe.
1 Marsh Hawk,
3 Moths,
2 Screech Owls,
31 Squirrels of various species.

Brown, A. C.
1 Magnolia Warbler,
1 Myrtle "
1 Oven-bird.

Brown, Chas. E.
204 Ants,
280 Insects, St. Louis, Mo.
1 Lot of Shells,
1 Oven-bird,
31 Shells, St. Louis, Mo.

Brown, T. D.
1 Tiger Salamander.

Brummer, W. F.
1 Muskrat.

Buuck, F. C., Wauwatosa, Wis.
1 Old Squaw Duck.

Chadwick, Geo. H., Rochester, N. Y.
32 Fresh water Shells.

Clowes, Herbert.
24 Insects.

Couse, Miss Edith.
1 Downy Woodpecker,
1 Oven-bird.

Crosby, H. A.
1 Sora Rail.

Dahinden, Otto.
1 Flying Squirrel.

De Moe, Miss Maud.
1 Insect.

Dennhardt, A. H.
1 Sloth, Nicaragua.

Deveney, Wm.
1 Insect.

Doyle, Raphael.
2 Moths.

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Edwards, J. T., Medford, Wis.
1 Hairy Woodpecker,
1 Northern Pileated Woodpecker,
1 Pine Grosbeak,

Ellsworth, W. H.
7 Fresh-water Shells.

Engel, Chas.
1 Babirusa alfurus, skull, Sumatra.

Espenhain Dry Goods Co.
Silk Moths, several dozens, Japan.

Fernekes, Val.
6 Insects,
1 Rose-breasted Grosbeak.

Fiebrantz, A. M.
1 Pigeon.

Gleisner, Miss Almira.
1 Luna Moth.

Graenicher, Dr. S.
12 Fresh water shells.

Hakenjos, Miss Minnie, Negaunee, Mich.
1 Wasp's Nest.

Halse, S. J.
1 Insect.

Hamilton, H. P., Two Rivers, Wis.
7 Fresh water Shells.

Hamann, Prof. Emil.
1 Screech Owl.

Hanson, Christ.
1 Oven-bird,
1 Rose-breasted Grosbeak.

Hayes, Miss Mary E.
1 American Bittern.

Heath, Albert.
1 Tarantula, Central America?

Heim, Carl.
1 Parokeet.

Heim, John F.
1 Parokeet.

Henderson, Eddie.
1 Bay-breasted Warbler,
1 Wilson's Thrush.

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Heuell, Geo.
1 Northern Flicker.
Heyl, John.
2 Red-shouldered Hawks.
Heyn, Louis.
1 Oven-bird.
Hilton, Mrs. Wm. N.
1 Chicken, monstrosity.
Hirsch, Herman.
4 Muskrats, young.
Hollnagl, Miss Annie, Thiensville, Wis.
1 Old Squaw Duck.
Horton, S. C.
1 Blackburnian, 1 Chestnut-sided, 1 Magnolia and 1 Wilson's Warbler.
1 Blue-headed Vireo,
1 Oven-bird.
Hoyt, F. W.
1 Mounted Tarpon, Florida.
1 Saw-fish saw, Florida.
Jackson, Miss Lois.
2 Alligators, Florida.
1 Sea Crab, Seattle, Wash.
Jansen, L. A.
1 Big-footed Tiger Swallow Pigeon,
2 Swallow Pigeons,
1 White Russian Trumpeter Pigeon.
Kalhart, H.
1 Caterpillar,
1 Sora.
Kaul, Chas. J.
55 Insects,
1 Oven-bird.
Kaul, Miss Lydia.
1 Mud Wasp's nest.
Kieni, Miss M. E.
1 American Redstart,
1 Black-throated Blue and 1 Canadian Warbler,
1 Brown Creeper,
1 Yellow-bellied Sapsucker.

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Kirchner, H. A.
4 Killdeers,
3 Prairie Horned Larks,
1 Purple Finch,
1 Red Squirrel.

Korb, Wm.
1 Black Hungarian and 1 Maltese Hen Pigeon,
1 Roller Pigeon.

Kraus, John.
1 Northern Flicker,
1 Garter Snake,
1 Nighthawk.

Krsek, Miss Julia.
1 Dragon Fly.

Kugler, John.
1 Curlew.

Lane, Miss Nelliray.
2 Pigeons.

Laue, A. F.
2 Insects.

Laur, Miss Paulina.
1 Towhee.

Lepper, M. F., Menomonee Falls, Wis.
1 Blue Jay, nest and 4 eggs.

Liefbroer, Peter.
1 Spotted Sandpiper.

Maercklein, Walter.
1 Scorpion, Central America?

Manthey, Wm.
1 Moth.

Maschmeyer, H.
1 Blue and 1 White Frillback Pigeon.

Melms, Dr. Herman.
1 Horned Grebe.

Meyer, Miss Else.
1 Mud Puppy.

Miller, O. F.
1 Black Bear cub,
1 Yellow Baboon, Abyssinia?

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Mitchell, Prof. I. N.
3 Brown Bats.
Mommsen, Meinard.
1 Eider.
Monroe, Chas. E.
2 Fresh water Shells.
Mueller, Miss Carla.
2 Painted Turtles.
National Soldiers' Home.
1 Black Swan, Australia.
Nicholson, Bishop, Rt. Rev. I. L.
1 Mammoth, part of pelvis of, Seattle, Wash.
Ochsner, E. D., Prairie du Sac, Wis.
1 Mole Shrew,
5 Northern Flickers,
2 Owls,
2 Pied-billed Grebes,
3 Quail,
2 Red Squirrels,
1 Tiger Salamander,
2 Wood Ducks.
Olcott, Miss F. M.
1 Magnolia Warbler.
Olle, Michael.
1 Loon.
Peckham, Dr. Geo. W.
1 Insect.
Pierce, C. S.
1 American Coot.
Porter, Pierce.
1 Goldfish.
Price, Clair and Hattie,
1 Ruby-throated Hummingbird.
Reinhardt, G. L.
3 Cockroaches.
Remington, Horace.
1 Yellow-bellied Flycatcher.
Riebon, Gustav.
1 Golden-crowned Kinglet.

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Rodee, W. I.
1 Sora,
1 Sparrow Hawk.
Rohde, Paul C.
1 Red-breasted Nuthatch.
Rossebo, H.
2 Fresh water Shells.
Schluenz, Dr. R. A., Abrams, Wis.
2 Whistling Swans.
Schoenebeck, A. J., Kelley Brook, Wis.
2 Chimney Swifts and nests,
3 Chipping Sparrows and nest,
6 Eggs of Black Tern,
5 Eggs of Long-billed Marsh Wren,
5 Eggs of Oven-bird,
1 Florida Gallinule and 14 eggs,
4 House Wrens,
1 Nest of Cedar Waxwing and 4 young,
1 Nest of Eave Swallow and 3 young,
3 Pied-billed Grebes,
1 Prairie Hen, young,
1 Timber Wolf skin.
Schoenebeck, Carl, Lena, Wis.
3 Black Bears, young.
Schoenebeck, Walter, Kelley Brook, Wis.
1 Chipmunk.
Schulz, Rev. E.
1 Yellow-billed Cuckoo.
Selle, Miss Louisa.
1 White-throated Sparrow.
Sherman, Dr. L.
1 Insect.
Short, H. S., Santa Barbara, Cal.
11 Marine Shells, Santa Barbara Channel.
Shrosbree, Geo.
2 Garter Snakes,
1 Herring Gull,
1 Old Squaw Duck.
Smedley, Miss R. A.
1 Screech Owl.

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Smithsonian Institution, Washington, D. C.
68 Moulds of Fish.

Staudy, Miss Abbie.
1 Black-throated Blue Warbler.

Stewart, Miss M. E.
1 Nest of Baltimore Oriole.

Street, Louis H.
1 Whistling Swan.

Teller, Mrs. E. E.
3 Shells, Arkona, Can.

Tesch, John H.
1 Nest of Tarantula, California?

Thomas, Theo., Jr.
1 Horned Grebe.

Traut, Peter.
1 Eskimo Dog, Alaska.

Trowbridge, Mrs. W. E.
33 Violet Snails, Long Beach, Cal.

Van Vechten, James and Roger.
2 American Bitterns,

Vose, Miss Eveline.
1 Live Alligator, Florida.

Wahl, Dr. Emil.
2 Golden-eyed Ducks,
4 Hooded Mergansers,
1 Horned Grebe,
2 Lesser Scaup Ducks.

Wahl, Robert.
1 American Scaup Duck,
1 Cow-bird,
1 Horned Grebe,
1 Killdeer,
2 Lesser Scaup Ducks,
1 Loggerhead Shrike,
2 Meadowlarks,
2 Red-breasted Mergansers,
1 Red-winged Blackbird,
1 Ruddy Duck,
1 Yellow-headed Blackbird.

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Walters, Willie.
2 Golden-crowned Kinglets.
Ward, Miss Alice G.
1 Insect.
Ward, Mrs. Henry L.
1 Yellow-throated Vireo.
Ward, Henry L.
1 Chipping Sparrow,
1 Nighthawk,
1 Northern Flicker,
1 Sora,
Webb, Lindsey.
1 Connecticut Warbler.
Weinstein, Maurice.
1 Caterpillar.
Wells, Philip.
8 Fresh water Shells.
Wheeler, Miss Olive C.
4 Fresh water Shells.
Whitcomb, Mrs. F. C.
1 Golden-crowned Kinglet.
Wille, Fritz.
1 Purple Marten.
Windfelder, E. W.
1 Mole Shrew.
Wolfenden, Abraham.
1 Moth.

Museum Expeditions.

1	Bat,	Grand Canon, Ariz.
64	Birds.	Muskego Lake, Wis.
205	Birds,	Oconto Co., Wis.
20	Birds' nests,	" " "
8	Birds' eggs,	" " "
9	California Sea Lions,	Channel Islands, Cal.
1	Chipmunk,	Nagawicka, Wis.
6	Ducks,	Milwaukee.
2	Gulls,	"
118	Insects,	"
66	Insects,	Channel Islands, Cal.

Digitized by Google

1	Meadow mouse,	Muskego Lake, Wis.
181	Shells,	" " "
71	Shells,	Oconto Co., Wis.
133	Shells,	Channel Islands, Cal.
12	Small mammals,	Santa Barbara and Channel Isls., Cal.
11	Squirrels,	Nagawicka, Wis.
33	Squirrels, mice, etc.,	Kelley Brook, Wis.
13	Star fish and sea urchins,	Channel Islands, Cal.
4	Steller's Sea Lions,	" " "

Acquired by Exchange.

44	Coleoptera,	Wisconsin.
19	Diptera,	Various localities.
20	Hemiptera,	" "
51	Hymenoptera,	" "
65	Lepidoptera,	" "
281	Mollusks,	" "
5	Odonata,	" "
2	Orthoptera,	" "

Acquired by Purchase.

2	Alaskan Yellow Wagtails,	Alaska.
1	Anteater, 1 Tyara, 1 Otter,	Nicaragua.
1	Elk, yearling,	Wyoming.
1	Fish,	Santa Catalina Isl., Cal.
15	Invertebrates,	" "
78	Mammals,	Wisconsin.
55	Mammals, tapir, deer, peccaries, etc.,	Veracruz, Mex.
200	Mammals,	Cal., Nev., Alaska, etc.
1	Mearns Partridge,	S. W. United States.
1	Octopus,	Europe.
2	Pouched Gophers,	Indian Terr.
5	Red Bats, adult and 4 young,	Milwaukee.
2	Red Bats, adult and young,	"
160	Reptiles,	Veracruz, Mex.
1	River Lamprey, ligamentary skeleton,	Europe.
1	Tapir, 1 Peccary,	Brazil.
1	Wild Cat,	Arbutus, Wis.

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BOTANY.

Donations.

Brown, Chas. E.
5 Mushrooms.
Cusick, Fay L.
1 Ginseng plant.
Hoffman, Jos.
1 Mushroom.
Mand, Miss Lucile.
1 Mushroom.
Wisconsin Mycological Society.
90 Mushrooms.

Museum Expeditions.

101 Plants from Ariz., California and Oregon.
6 Mushrooms.

Exchange.

116 Ferns from Hawaiian Archipelago.

PALEONTOLOGY.

Donations.

Doerflinger, C. H.
1 Belemnite, showing rings of silicification.
1 Foot-print of Brontozoum giganteum, Connecticut Valley.
1 Halysites catenularia,
1 Ischypterus micropterus, Connecticut.
1 Pentremites, Abbeville, France.
Bacon, E. N.
4 Pentamerus oblongus.

Museum Expedition.

66 Ammonites and other fossils, Shasta, Cal.

Purchase.

1 Elepas primigenius, molar, Dawson, Alaska.

MINERALOGY AND GEOLOGY.

Bacon, E. N.
11 Minerals,
Baer, Miss Myrtle W.
1 Malachite, incrusting copper, Houghton Co., Mich.
15 Specimens of Copper, " " "

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Branburg, F.

1 Silicified Wood, Lincoln, Mich.

Brown, Abe.

1 Differential erosion in quartzite, Whitbeck, Mich.

Dixon Crucible Co., Jos., Jersey City, N. J.

1 Flake Graphite (lubricating flake),
1 " " (electrotyping graphite),
1 Graphite, Bavaria.
1 " Ceylon.
1 " Ticonderoga, N. Y.

Doerflinger, C. H.

93 Specimens of Minerals from the U. S. and foreign countries.

Elkey, W. H.

3 Float Coppers.

Fuiten, F. W., Westfield, Wis.

1 Granite nodule, polished.

Klauser, Mrs. Julius.

1 Amethyst.

Laue, A. F.

2 Erosions.

Ludwig, Ernest.

2 Amethysts.

Luebeck, A. C.

1 Millerite.

McCormack, Smith.

1 Iron impregnated sandstone mould of clay concretion?

Merrill, Mrs. J. B.

64 Minerals, United States.

Monta, D. E., Genesee, Wis.

1 Marcasite concretion.

Roesselet, Walter.

1 Pyrite in coal.

Tatu, I. J., Hillsboro, Wis.

1 Gypsum.

Wheelock, John, Ono, Cal.

1 Gold Quartz, Shasta Co., Cal.

Museum Expedition.

25 Specimens of minerals and rocks, Arizona and California.

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Acquired by Purchase.

1 Contorted Gneiss, University Heights, N. Y. City.
1 Specimen of Copper, Calumet, Mich.
1 Water Erosion.

ARCHAEOLOGY.

Donations.

Brockman, Frank.
1 Stone Axe, grooved all around, Sioux City, Ia.
Brown, Chas. E.
50 Bone fragments, teeth, etc.,
100 Nodules, flakes, etc.,
50 Potsherds.
Doerflinger, C. H.
145 Archaeological specimens, France, Switzerland, Mexico.
Elkey, W. H.
1 Gorget,
1 Pestle, Indiana.
1 Pestle, Ripley, O.
Leuthstrom, Mrs. C. A.
2 Shell Celts, Barbadoes, W. I.
Mann, Chas. L.
1 Charm?; portion of deer jaw and teeth.
1 Perforated shell and 6 shell beads.
Rooney, Miss Gertrude.
2 Clay Pipes, Bear Point, Ala.
8 Fragments of pottery, " " "

Exchange.

1 Pithecantropus erectus, cast of skull, Java.

Museum Expeditions.

1 Indian Skeleton, Santa Rosa Isl., Cal.
3 Pestles, Shasta Co., Cal.

Acquired by Purchase.

1015 Cave Dwellers, Lake Dwellers, artifacts, etc., France and Switzerland.
1 Copper Knife,
1 Discoidal, Dakota?
41 Flint Arrows and Spears,

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13	Flint Arrows,	Illinois.
3	" Celts,	Union Co., Ill.
4	" Chisels,	Illinois.
2	" Drills,	Jackson Co., Ill.
1	" Hoe,	Union Co., Ill.
2	" Knives,	Illinois.
2	" Scrapers,	Jackson Co., Ill.
17	" Spears,	Illinois.
13	" Spades,	"
2	" "	Copper Co., Mo.
11	Grooved Axes,	
46	Shell Wampum,	Bowling Green, Ky.
8	Stone Pestles,	O., Ind., Ky., W. Va. and Ill.

ETHNOLOGY.

Donations.

Bartlett, Dr. E. W.

1 Copy of Treaty between the U. S. and France, made Apr. 30, 1803.

Brown, Dr. H. M.

1 Ancient Japanese armor, Japan.

Clark, W. L., Santa Barbara, Cal.

1 Minute Indian basket, California.

1 Piece of rafter of adobe building, Santa Barbara, Cal.

Doerflinger, C. H.

2 Chocolate beaters, carved wood, Mexico.

Hohl, Mrs. Helena, Beaver Dam, Wis.

1 Gold coin scales, U. S.

Mann, Chas. L.

2 Apache baskets, New Mexico.

1 Apache water bottle, " "

McLaren, W. P.

1 Newspaper, "The Public Advertiser," London, Eng., Jan. 12, 1792.

1 Newspaper, "The Sun," London, Eng., Sept. 1, 1794.

Meyer, Mrs. Sophia.

1 Iron clock, 1802, Tübingen, Würtemberg.

Milton, Mrs. Emily.

1 Double-barreled gun, Germany.

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Paul, Mrs. Geo. H.

1 Pair seal-lined wooden soled shoes or klopstocks, Norway,

Pauly, Maj. Emil, Governor's Island, N. Y.

5 Rifle cartridges made by natives, Philippine Islands.

Plankinton, Miss Elizabeth.

2 Brass candlesticks, Korea.

17 " household vessels, "

Stewart, Miss M. E.

1 Old candle mould.

Zimmer, A. B., Wauwatosa, Wis.

1 Axe.

Acquired by Purchase.

63 Articles of domestic use, chase, etc., Copper River, Alaska.

258 " " " " " " Congo River, Africa.

1 Bow, quiver and 41 stone tipped arrows, Ft. Apache, Ariz.

5 Dancing masks, set used in Gan-bi-go-tshi-tathl dance, Ft. Apache, Ariz.

1 Doll with papoose cradle, " " "

1 Hoopa dancing cape, Northern California.

1 Medicine staff, Ft. Apache, Ariz.

1 Violin and bow, " " "

1 War club, " " "

NUNNEMACHER COLLECTION.

Donations.

Kuntz, Henry J.

1 Rifle.

Acquired by Purchase.

3 Arrows, poisoned, Admiralty Islands.

3 " California.

1 Belt with 351 sets of caribou teeth, Yukon Dist., Alaska.

1 Carving of monkeys in ivory, bone, horn, wood, and metal, Japan.

1 Filigree carved talc casket, India.

1 Flint-lock blunderbuss, Scotland?

1 " " rifle (R. Hyslop), New York.

1 " " " 1818, Harper's Ferry.

1 " " breech-loading, 1831, " "

2 Incense burners, Japan.

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1	Indian head, shrunken,	Peru.
1	Model of Pagoda, carved in agalmatolite,	China.
1	Pipe with holder and opium box, brass,	"
1	Pistol, muzzle loading, brass,	London, Eng.
1	" Derringer, double barrelled,	Ilion, N. Y.
1	Pot, bronze,	Japan.
1	Rock crystal ball,	"
2	Silver dishes, gold plated,	Russia.
2	" cup, engraved,	"
1	" incense holder,	"
2	Snuff bottles, carved agate,	China.
1	" " " jade,	"
1	" " " rock crystal,	"
1	Tea kettle, copper,	Russia.
2	Tobacco pipes, cases and holders, carved,	Japan.
1	" " cloisonne, snake case,	"
1	Vase, bronze, inlaid with gold and silver,	Burmah, India.
1	" " engraved by Masahale,	Japan.
1	Watch, made by Bregnet, Paris,	France.
1	" gold, jeweled hands,	Paris, France.

NUMISMATICS.

Donations.

Bartlett, Dr. E. W.

1	Four dollar bill, 1776,	Philadelphia.

Brickner, Wm. B.

1	Cincuenta centavos, 1896,	Cuba.

Grutza, Rev. W. I.

529	U. S. and foreign coins.	

Mestreotes, Geo.

1	Five lepta, 1895,	Greece.

Patterson, Capt. F. M.

1	Half penny, 1738,	Great Britain.
1	" " token, 1840,	" "
1	One cent, 1854,	United States.
43	Postage stamps.	

Shrosbree, Geo.

1	One farthing, 1896,	Great Britain.
1	Two annas, 1888,	British India.

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Tesch, John H.

31	Trimes, silver and nickel,	1851-1889,	United States.
25	Five cents, nickel,	1876-1903,	" "
36	Half dimes, silver,	1795-1872,	" "
77	Ten cents,	1809-1903,	" "
74	Twenty-five cents,	1805-1903,	" "
82	Fifty cents,	1795-1903,	" "
60	One dollars,	1795-1903,	" "

Weihbrecht, Leonhard.

1	Five dollar note, 1864,	Richmond, Va.

Wennips, Miss Johanna.

1	Five cents, silver, 1850,	Netherlands.
1	Half cent, copper, 1903,	"
1	Ten cents, silver, 1871,	"
1	Twenty-five cents, silver, 1897,	"

Wilson, Clare F.

1	One hundred dollar confederate bill,	United States.

LIBRARY.

By Donation and Exchange.

Alabama—Geological Survey of Alabama, Montgomery.

Index to The Mineral Resources of Alabama. Smith & McCalley.

Arizona—Phoenix Free Museum.

Bulletin No. 1.

California—University of California, Berkeley.

Publications, Am. Arch. & Eth., Vols. 1-2.
" Zoology, Vol. 1, Nos. 3, 6.

California Academy of Sciences, San Francisco.

Bulletin, Vol. 1, No. 1.
Constitution and By-Laws, 1904.
Memoirs, Vols. 2-4.
Occasional Papers, Vols. 3, 4, 6, 7, 8.
Proceedings, Botany, Vol. 1, Nos. 3-10; Vol. 2.
" Geology, Vol. 1; Vol. 2, No. 1.
" Math.-Phys., Vol. 1, Nos. 1-8.
" Zoology, Vol. 1, Nos. 6-12; Vol. 2; Vol. 3, Nos. 1-6.

Colorado—University of Colorado, Boulder.

Studies, Vol. 2.

Colorado College, Colorado Springs.

Studies, Vols. 11-12.

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TWENTY-THIRD

ANNUAL REPORT

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OF THE

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OF THE

CITY OF MILWAUKEE.

SEPTEMBER 1, 1904, TO AUGUST 31, 1905.

OCTOBER 1, 1905.

MILWAUKEE
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E. F. Deuster, - - - - - - - Term expires May, 1906
T. J. Pringle, - - - - - - - Term expires May, 1906

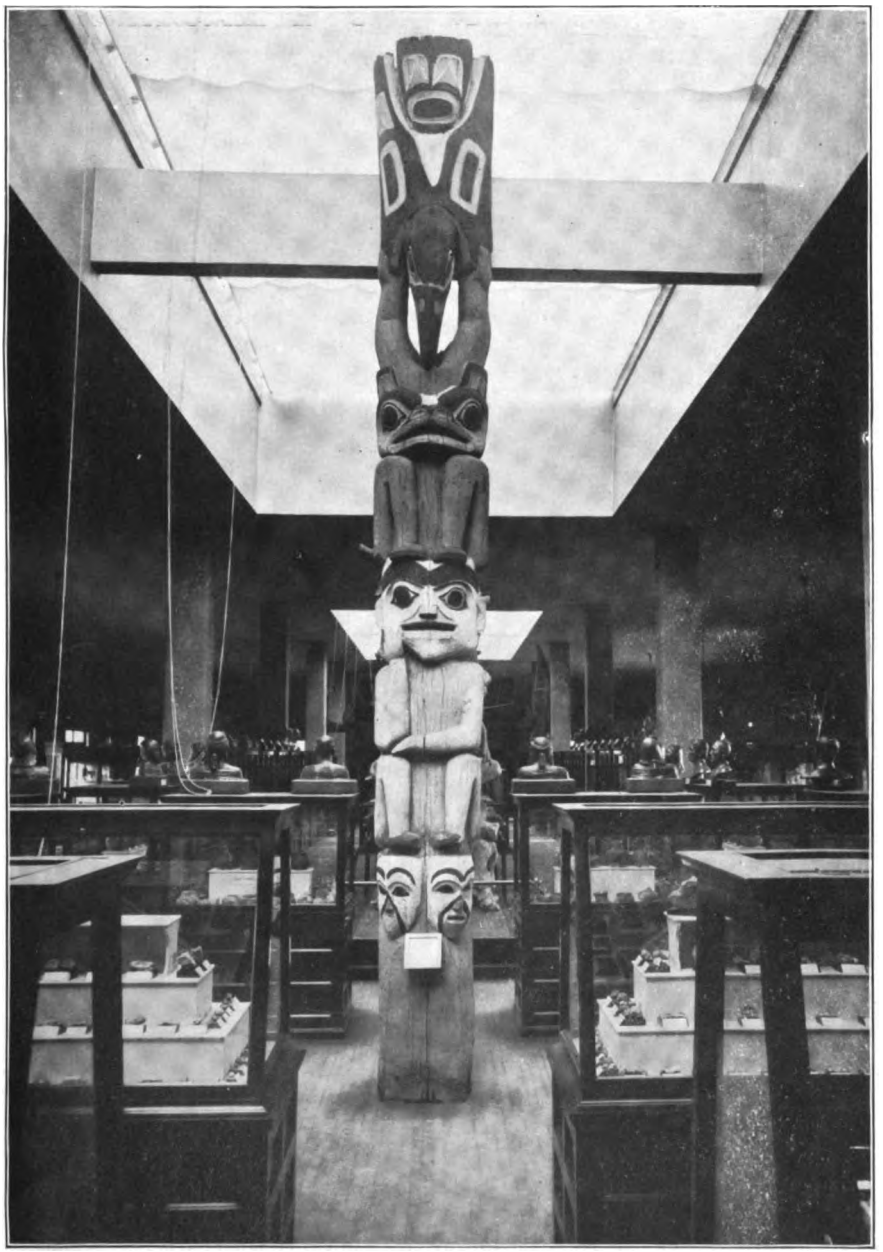
EX-OFFICIO.

C. G. Pearse, Sup't of Schools, - - Term expires May, 1907
A. S. Lindemann, Pres't of School Board, Term expires May, 1906

OFFICERS.

Edward W. Windfelder, President.
Henry L. Ward, Secretary, Ex-Officio.

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MORTUARY TOTEM POLE, VANCOUVER ISLAND.

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A. S. Lindemann,
Fred. Grossenbach,
E. F. Deuster,
Edward W. Windfelder, Ex-Off.

PURCHASING.

Ferd. Meinecke, Chairman,
R. B. Mallory,
Robert Nunnemacher.

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EXCHANGING.

T. J. Pringle, Chairman,
Ferd. Meinecke,
Fred. Grossenbach.

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T. J. Pringle,
E. F. Deuster.

BUILDING.

E. F. Deuster, Chairman,
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Robt. Nunnemacher,
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Ferd. Meinecke, Chairman,
R. B. Mallory,
T. J. Pringle.

Henry L. Ward, Advisory Member of all Committees.

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HONORARY CURATORS

Dr. S. Graenicher,	Ichthyology and Herpetology
Carl Hagenbeck, Hamburg, Germany,	Zoölogy
Albert von Hoffmann,	Archaeology
*Adolph Meinecke,	At Large
Chas. E. Monroe,	Palaeontology
A. J. Schoenebeck, Kelley Brook, Wis.,	Oölogy
August Stirn,	Ornithology

MUSEUM SERVICE

Henry L. Ward,	Director
Chas. T. Brues,	Curator of Invertebrate Zoölogy
Carl Thal,	Curator of Books
Wm. B. Brickner,	Special Clerk
Charles Brandler,	Taxidermist
Geo. Shrosbree,	Taxidermist
Paul C. Rohde,	Assistant Taxidermist
Herbert Clowes,	Landscape Modeler
†Chas. E. Brown,	Attendant
Henry E. Eichfeld,	Attendant
Lydia Nehrling,	Attendant
†Olive C. Wheeler,	Attendant
Alice Pluck,	Attendant
Phillip J. Pier,	Janitor
Clare F. Wilson,	Chief Engineer

* Died June 16, 1905.
† Resigned.

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Report of the President of the Board of Trustees.

Milwaukee, Wis., Sept. 29, 1905.

To the Honorable the Common Council of the City of Milwaukee.

Gentlemen—In accordance with the mandates of Section 8 of Chapter 328 of the Laws of Wisconsin of 1882 the Board of Trustees of the Public Museum of the City of Milwaukee herewith presents its twenty-third annual report covering the museum year ended Aug. 31st last.

During this period twelve meetings of the Board of Trustees were held as well as several committee meetings and at these the interests of the museum were furthered to the best of our ability.

The large numbers of persons visiting the museum has been very gratifying, particularly so as it is apparent that an increasing number are appreciating and taking advantage of the multiplying opportunities for serious study being presented by the elaboration of the collections exhibited. The use of the institution by the school teachers and pupils is becoming greater year by year, emphasizing the regard in which it is held by them.

The lack of space for rearrangement and expansion has been a serious obstacle for which there has long been sought a remedy. Matters have now so shaped themselves that we confidently expect within a few years to erect a considerable addition to the building that will afford us the required space for some years of growth and the establishment of an historical section to meet a long expressed wish of the community.

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During the year 6,711 more specimens have been added to the museum's collections than have been discarded, exchanged or otherwise disposed of. The inventory on Aug. 31, stood as follows:

Mineralogical and geological specimens	7,146
Palaeontological specimens	15,130
Botanical specimens	24,412
Zoölogical specimens	170,668
Archaeological specimens	20,490
Ethnological specimens	4,109
Arms, armors, carvings and other objects contained in the Rudolph J. Nunnemacher collection	3,018
Coins, bank notes, medals, etc	3,243
Books, pamphlets, maps, etc	11,808
	260,024

The financial statement of the board for the year is:

Balance in Museum fund Sept. 1, 1904	$10,662.74
Refunded from various sources	152.81
Appropriation to Museum fund Jan. 1, 1905	26,331.67
	$37,147.22
Total expenditures during the year	25,168.54
Leaving a balance on Sept. 1, 1905, of	$11,978.68

The details of these matters will be found in the Director's report to which you are respectfully referred.

We desire to express our thanks to those who have assisted the museum by the donation of specimens or in other ways have aided in its upbuilding and to the press for its frequent kindly notices of additions and alterations that are of public interest.

Respectfully submitted,

E. W. WINDFELDER,

President Board of Trustees.

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ANGLER IN IVORY.
BY MURATA, (KICHIGORO), TOKIO, JAPAN.
NUNNEMACHER COLLECTION.

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Report of the Director of the Museum to the Board of Trustees.

Gentlemen—This, the twenty-third (my fourth) annual report upon the affairs of the museum is submitted to you, as prescribed by state law, with the hope that the results herein set forth may afford some compensatory satisfaction for the time that you have given to the monthly board meetings, the various committee meetings and other museum work.

The general condition of the museum shows an improvement over that last reported though it still lacks very much, in the matter of arrangement and labeling, of attaining the ideal that we have in mind. Part of this work can not be undertaken until such time as we have additional space at our disposal for the rearrangement and expansion of collections that require such treatment. Other parts of the work wait for opportunity to attend to them.

During the year 8410 new specimens were received; the caring for which, including in many cases identification, cataloguing and labeling required a considerable expenditure of time.

Various specimens have been disposed of by exchange or otherwise and in the department of entomology a careful revision of the collections resulted in the discarding of about 1800 specimens. The subtraction of these accounts for the difference between the present inventory and the figures that would be shown were the accessions added to the last inventory without these diminutions.

As the influence of the museum broadens and we take up new lines of work or devote more attention to those already

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inaugurated, less time is left for the care and development of the long established collections. Conditions of exhibit that a few years ago would have been considered credible to a museum are now antiquated and intolerable, and therefore collections require continuous attention or they retrograde. Each addition or new departure levies a new and unceasing tax upon the curatorial force. During the past few years the scope of the museum has broadened considerably while long established features have materially grown. In the various changes that have taken place in the museum's staff its efficiency has become greater in the aggregate and there has been an increase of one in its number; but it is very desirable that in the near future a farther addition should be made.

During the year about 900 letters were written exclusive of the many official documents and routine notices of which no copies were kept. Some of these, written in reply to requests for information, required much time and consideration in their framing.

The public are fast learning that this institution is a free dispensory of natural history lore, and so increasing numbers come for the identification of specimens and exact information concerning them and advice on many matters along our lines.

While all these inquiries take time, a great deal in the aggregate, and are disturbing to systematic work yet they are welcomed as showing that we are getting nearer to the people and that they are learning more and more to value their museum and to appreciate that at least an attempt will be made to answer any proper question coming within our line of work.

The year has passed with fewer acts of vandalism than usual. We have lost one reference book from one of the reading tables and two specimens, of very little intrinsic value, were stolen from a case accidentally left unlocked.

The removal of all restrictions governing the age of unac-

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companied children has entailed more work upon the attendants in curbing the propensities of some of these to yield to the allurements of an occasional game of tag among the cases; but this is more than made up by the intelligent interest and sometimes surprising accuracy of information displayed by many of these young children. In order to extend to the widest practical degree the educational influence of this institution it is very important to get hold of the child at an early period; and while it is true that knowledge begins in wonder yet a young child can often grasp the import of a systematic exhibit if attractively and lucidly presented.

During the year the rules of your board governing the museum were revised, making some important changes and additions, chief among which were the establishment of curators of departments, the enactment of a prohibitory rule affecting the making or owning of private collections by museum employes, and the adoption of the title "director" for the hitherto misnamed "custodian."

Several changes have occurred in the personnel of the institution. Miss Wheeler resigned in November 1904 in order to take up the cares and joys of matrimony. Miss Pluck was appointed at that time to the position left vacant. In January, 1905 Mr. Chas. T. Brues, M. S., of the Bureau of Entomology at Washington, a post graduate of two universities, well versed in general natural history and especially trained in entomology, was elected curator of invertebrate zoology and in March joined the museum. His work has already produced a marked improvement in his department, particularly in the entomological division that has been without competent direction. In July Mr. Brown, who had been deputized as assistant to Mr. Brues, resigned to devote himself exclusively to work for the Wisconsin Archaeological Society.

In the death of Adolph Meinecke, which occurred in June, the Museum lost one of its oldest friends than whom there was none who had its welfare more constantly in mind or who

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so frequently sent in some remembrance in the form of specimens that he thought would be of interest. Mr. Meinecke was appointed on the first board of trustees in February, 1883 and served continuously until October, 1900. His interest was not perfunctory; but was always vitalized by a desire to have the people enjoy to the utmost the benefits of the institution and come in sympathy with that study of nature which he himself so greatly enjoyed as a relaxation from the cares of business when actively engaged in it and later as a pastime when feeble health had necessitated his retirement.

For the last few years of his life he was compelled to reside in the south during cold weather; but when in Milwaukee he was a frequent visitor to the Museum and delighted to discuss plans for the growth and development of the institution that he had done so much toward founding and carrying through its childhood days. There was a kindly gentleness in his manner and an appreciation of what was being done by others since he left the board that spoke much for the openness of his nature. In all departments of the Museum are a multitude of specimens bearing his name as donor.

DONATIONS.

The flow of donations of specimens to the Museum has continued. We have received the unsolicited promise of a very valuable collection of Indian pipes, nearly all from Wisconsin, that the collector and owner, Mr. Geo. A. West, informs us he has bequeathed to the Museum; but very probably will present during his life.

The natural history specimens of our pioneer naturalist, Dr. Increase Allen Lapham, consisting of shells, botanical specimens, fossils, minerals and rocks, in all 890 specimens, have been donated to the museum by his family. These are chiefly interesting from a historical point of view as being among the possessions of one who first represented the scientific spirit in Milwaukee and whose helpfulness and modesty

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FISHERMAN WITH LOAD, BRONZE.
BY KANADA, (KANEJIRO), TOKIO, JAPAN.
NUNNEMACHER COLLECTION.

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so greatly endeared him to the citizens of his generation and has kept his memory as a cherished treasure of his numerous friends. Had Dr. Lapham lived a decade longer he certainly would have been active in the founding of this institution.

COLLECTING.

Less than the usual amount of collecting has this year been done by the museum staff as the press of work in the building seemed not to warrant our absenting ourselves. With the exception of a number of excursions by various members in the environs of Milwaukee the only collecting trip was a biological reconnizance of the Door County peninsula and its outlaying islands. This was very hurriedly and consequently imperfectly made. The Director and Messrs. Brues and Shrosbree took part. The expedition lasted but a month during parts of June and July. The fauna and flora collected and observed have not yet been plotted. The specimens sent in consisted of: 16 mammals, 194 birds, 17 birds nests and 59 eggs, 8 reptiles and batrachians, 26 crustaceans, 710 insects, 303 mollusks, 212 mounts of plants, 79 mushrooms, 6 fossils, 61 archaeological specimens and 1 mineral.

One exchange and one purchase of archaeological specimens were made on this trip—the other specimens were collected.

Several desirable families of nesting birds were obtained and we were fortunate in collecting ample and most interesting series representing all stages of the Herring Gull and Caspian Tern from the egg to the adult bird taken at a breeding ground jointly occupied by them on Gravel Island. Accessories, photographs and other data for the fidel reproduction of the various family groups and their environments were taken.

Nearly a month of the Director's time in the fall and winter was occupied by two visits to the St. Louis Exposition in the acquisition of desirable specimens for the museum. A num-

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ber of important and valuable additions were thus obtained, which will be noted in their respective departments. The four groups of mammals loaned to the State Forestry Commission were dismounted, packed for return to Milwaukee and three of them again placed on exhibition here.

VISITORS AND EXHIBITS.

The number of visitors at the Museum is unquestionably increasing from year to year and several persons having a considerable acquaintance with the largest museums in America have remarked on the large number of visitors seen here. It is quite certain that on favorable days our floors are fully as crowded as those of any other museum of this country, or those of Europe with which we are familiar. Various persons have mentioned coming to the museum on Sunday afternoons to examine special exhibits and being unable to get near them on account of the crowd. It is very patent that our 38,000 feet of exhibition space with its present arrangement of cases is quite insufficient to accommodate the people and it is equally certain that our cases are insufficient to hold all the specimens now owned by the museum and which it is desirable to exhibit. In parts of the museum the cases are too near together for satisfactory illumination and many of the cases are so badly crowded with specimens that were we not in hopes of soon securing relief from this condition we would remove a considerable portion of their contents.

In the report of two years ago the establishment of an historical exhibit was suggested. In casting about for practical means of securing the much needed addition to our building it was found that there already existed a state law permitting the establishment of an historical museum. An amendment to the law was this year secured through the state legislature providing that such a museum could be established in connection with and under the management of the Public Museum. The Common Council will probably adopt the necessary reso-

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lution authorizing the establishment of this department in which case a material addition to the building and readjusting of the collections will be possible.

The museum has continued to loan its lecture room on certain nights to the Wisconsin Natural History Society, the Wisconsin Archaeological Society, the Wisconsin Mycological Society, and the Milwaukee County Medical Society. This relation has been advantageous to the museum in the case of the Natural History and the Mycological Societies and is eminently proper in aiding these other scientific bodies.

LIVE SPECIMENS.

The exhibit of live animals and wild flowers of this region that was established about three years ago continues to be as attractive a feature as in the beginning. When this departure was first inaugurated here we were unaware that any other museum maintained a similar exhibit, but soon learned that some European museums had already shown live things. The idea seems to have independently originated in various localities and now many museums both in the United States as well as in Europe are devoting some space to such exhibits. In January was added a balanced marine aquarium containing a stony coral and two species of sea anemones which, with the exception of the loss of some of the sea anemones, has been satisfactorily maintained to the great interest of many people who never before have had the opportunity of seeing these animals alive.

We are greatly indebted to the New York Aquarium through the kind courtesy of whose director, Mr. Chas. H. Townsend, this museum was supplied with sea water, sea lettuce and the animals mentioned.

While a great part of our educational influence can not be specified or gauged because it falls upon the ordinary visitor who comes and goes unnoted; yet there is a portion of which we can keep account.

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SCHOOL WORK.

Provision had been made for an anticipated increase in the circulation of loan specimens and collections during this year but the demand so far exceeded our expectations that at times we were unable to immediately comply with requests and had to place them on file until specimens were returned from other schools.

The record shows that a trifle more than five times as many specimens were loaned during this year as were in 1902, when this work was first taken under my direct supervision, and that there was a fair increase over last year. A few schools did not borrow at all while some borrowed several times. 126 separate loans were made. In all 54 different schools were borrowers. There were in circulation 422 specimens of mounted mammals and birds besides the fixed collections of lepidoptera, archaeological specimens and minerals and rocks.

It is quite impossible to determine, under present conditions, how many scholars have been reached by these specimens. Sometimes they are used before a single grade while at other times we have learned that a single borrowing has been used successively in every grade in the school to which it was loaned and in a few instances they have even been taken to other schools before being returned to the museum.

An exhibit of samples of our specimens as prepared for school circulation was made in the department of education of the Louisiana Purchase Exposition where it attracted favorable comment and was awarded a silver medal. Its association with the school exhibits and representation by their emissary resulted in this award being made to the Milwaukee School Board. These specimens are now on exhibition at the school board offices for which purpose they have been loaned by the museum.

In October, 1895, upon recommendation of Dr. Peckham, the first formal action was taken by the board of trustees for

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GROUP OF MEXICAN DEER.

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the establishment of these loan collections. In the annual report for 1896 it is stated: "In the course of the year about fifty cases of the more common minerals have been bought by the Museum for the use of schools. A collection of ten familiar birds in fifty sets has been completed by our taxidermist for the same purpose. Each specimen has been placed in a case by itself, with a short description attached thereto for the convenience of the teachers."

In the annual report for 1901 of the Carnegie Museum, Dr. W. J. Holland, Director, said that during the past year they had prepared collections of birds and insects for loan to schools. We are rather surprised to note in his last annual report, 1905, the statement that the Carnegie Museum was probably the originator of this now rather general practice. The system was inaugurated here before the Carnegie Museum was founded and was probably in vogue in other museums previous to its establishment here.

In order to increase the efficiency of the use of birds in the class room the director is preparing to lecture to the school teachers on this subject. Towards this end we have secured a first-class electric stereopticon outfit and have been preparing a series of lantern slides so that when it is convenient to have the teachers come to the museum lecture room we will be prepared to give an exposition of some of the fundamentals of ornithology.

During the year the director has lectured twice on archaeological subjects before Milwaukee Normal School classes and he and the curator of invertebrate zoology have taken charge of classes from various other schools in their visits to the museum.

The museum's school room has been maintained and furnished with specimens as in the past and Miss Merrill has there given hour lectures to between 15,000 and 20,000 pupils of the fourth to eighth grades of the public schools.

A superintendent of schools of one of the largest central

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cities who had spent several weeks in studying the relations of the larger museums to the schools of their respective cities, preparatory to establishing a school museum for his own city, after exhaustively examining our work informs us that we are doing more for the schools than any other museum in the United States is doing. In our last annual report relative to this work we stated: "There are but few others [museums] in this country that are doing as much." It is pleasing to find that this educator, after some weeks of special investigation, more than confirms our statement.

ANTHROPOLOGY.

A series of twenty-five busts of natives of various regions of the world have been made for us by F. B. Melville, all being life masks except two, which were from death. These are carefully colored from original notes and the anthropometrical data taken at the times of making the moulds has been placed on file. The name, age, place of birth and occupation of nearly every one of the persons moulded is noted on the labels so that the series is of more than ordinary value.

From the Alaskan territorial exhibit was purchased a very interesting mortuary totem pole, the erector of which was living at the time the Governor of Alaska secured the pole, and who translated to him the significance of each figure which the governor had transmitted to us.

Through Mr. Shelford, late curator of the Sarawak Museum, Borneo, we purchased a small but interesting collection of Dyak artifacts. From Benjamin Harrison, of Kent, England, was purchased a series of 41 eoliths supposed to represent the work of man at a period far anterior to that shown by our excellent palaeolithic collection from the cave dwellings of France. From the Egyptian exhibit at St. Louis was purchased a model boat about 4000 years old taken from one of the tombs. Various minor purchases in this depart-

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ment were made and several donations received. Many labels have been printed for this department.

During the year the specimens added were, 788 by purchase, 27 by collection, 3 by exchange, and 32 by donation.

NUNNEMACHER COLLECTION.

This falls properly under the division of anthropology though kept separate from the rest of the Museum in special rooms. At the exposition at St. Louis the various exhibits brought from all parts of the earth afforded opportunity to secure some valuable additions to it. Chief among the acquisitions was a very fine collection from the Philippines consisting of 101 specimens, largely arms and armor; a series of 11 old Alaskan baskets; a number of fine Japanese bronzes and ivory carvings, mostly from the Japanese Fine Arts exhibit and where they were awarded two grand prizes, one gold medal and one bronze medal. Three ivories from the exhibit in the Liberal Arts building were from a lot receiving a collective award of a gold medal. These specimens, in connection with the antiques already in the Nunnemacher collection, serve in a certain degree to round out this series, presenting a synopsis of the development of Japanese bronzes and ivories. From the Theo. Graf collection of Vienna was purchased an Egyptian mummy portrait in wax, painted about 2000 years ago during the period of Roman influence; from a missionary residing in the upper Congo, a collection of 76 objects, mostly arms and articles of personal adornment; and from the Soudan exhibit at St. Louis fifteen interesting specimens from that region. Numerous minor purchases were made adding in all 238 specimens to the collection.

During the year two manikins were made for the better display of Japanese suits of armor and a manikin was made for the cast of the armor of Henry II of France. The armor itself was steel plated in order to render its color more natural.

The remainder of the gun collection has been cleaned,

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labeled and placed on exhibition, completely filling the six cases constructed for it. This is one of the finest gun collections in the country. While no attempt has been made to exhibit every make of gun, many of which are practically identical, an effort has been made to secure the various types that have marked steps in the evolution of fire arms and to show a fairly complete series of those used by United States troops and the principal European armies. The collection is unusually strong in early guns such as match-locks, wheel-locks and flint-locks and has a number of rarities.

MAMMALS.

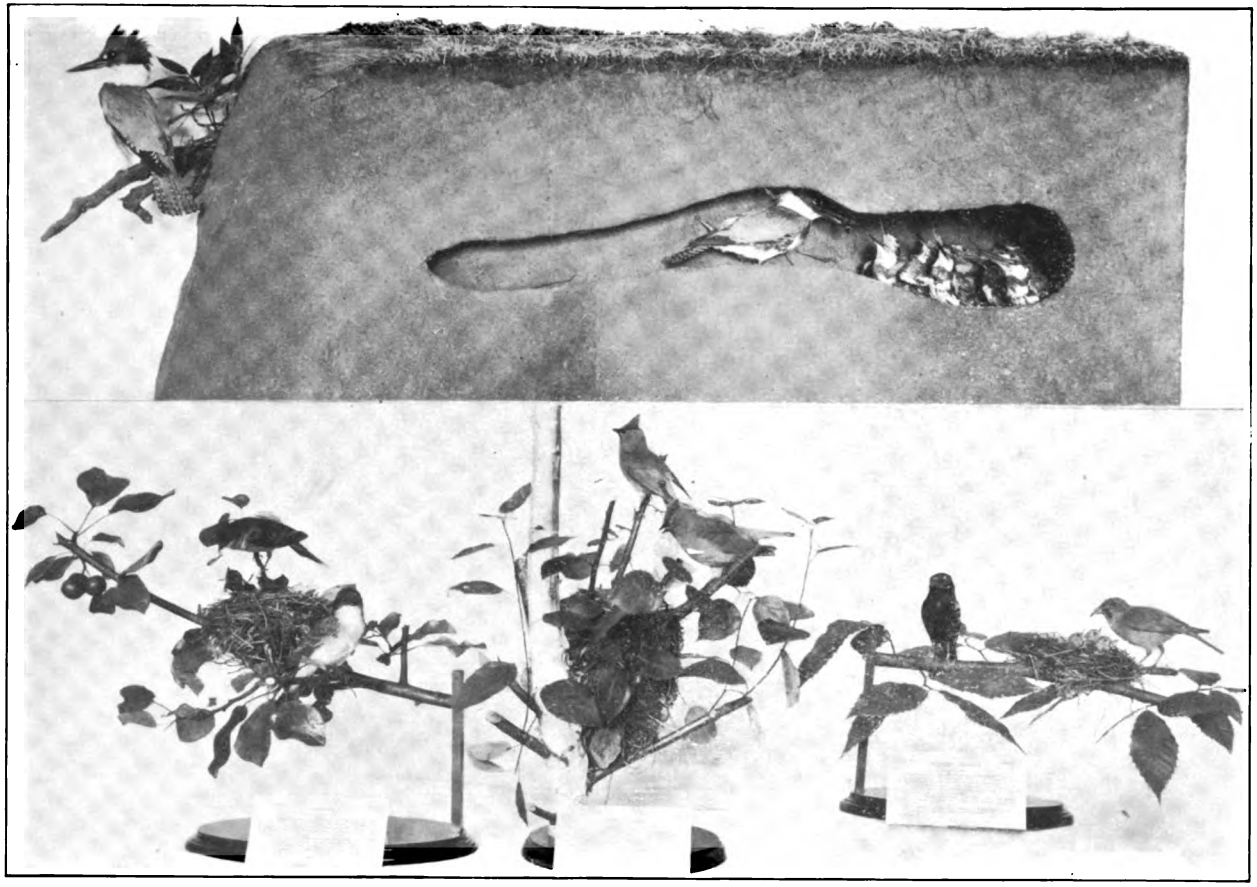
To the exhibition series there has been added a group of deer from near Perez, Veracruz, Mexico. This consists of three bucks of different ages, a female and a fawn all taken in the same region within a few days of each other. In this group, of which a photograph is presented, the accessories of a Andropogon grass and the Gelsemium with yellow flowers entwining among the grass presents a handsome appearance without interfering with as careful an examination of the well mounted specimens as the public cares to make.

Mounted specimens of the American Tapir from Parana, Brazil, of a Tapir from Perez, Veracruz, and of a number of smaller mammals have been added to the exhibition series. Several old mammals, including the lion, and eleven heads of deer and antelope have been taken down and remounted.

Among the additions to the mammal collections not yet prepared for exhibition is a fine group of excellently preserved skins of Caribou from near Howly, Newfoundland, that were presented by Mr. Van S. Bennett. They consist of adult male and female and young.

The additions to the mammals have been few this year, showing an increase of only 68 specimens of which but one was by purchase, 16 by collection and 51 by gift. The dona-

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GROUPS OF NESTING WISCONSIN BIRDS
KINGFISHER, KINGBIRD, CEDARBIRD, SCARLET TANAGER.

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tions exactly equal in number those of last year though more valuable in the aggregate. The purchases and collecting were much curtailed.

BIRDS.

Mounted family groups of Wisconsin birds showing both adults and their young and nesting sites of the following species were prepared and placed on exhibition during the year. Sparrow Hawk, Kingfisher, Ruby-throated Hummingbird, Kingbird, Bronzed Grackle, Purple Finch, Vesper Sparrow, Chipping Sparrow, Indigo Bunting, Scarlet Tanager, Bank Swallow, Cedar Waxwing, Chestnut-sided Warbler, Black-throated Green Warbler and House Wren. The beauty of these groups and the considerable amount of the life history of each species that can be shown renders them exceedingly popular with bird students.

A number of lacunae have been filled in the series of domestic pigeons, designed to show the results of artificial selection and at the same time to be a criterion to pigeon fanciers. The specimens have all been mounted on rail ends and fastened directly to the back of the case. This allows of their ready readjusting when other varieites are added. The series starts with the wild Rock Pigeon, from which all are supposed to have descended, and exhibits the more striking morphological changes that have been produced under man's direction. Some of these birds have taken several first prizes and one cost its owner $125. We are greatly indebted to the various fanciers who have so kindly interested themselves in adding to this series.

329 specimens of birds and 84 eggs and nests were added of which 2 were by purchase, 261 by collection and 150 by donation.

OTHER VERTEBRATES.

There has been very little change in these collections during the year. The Veracruz reptiles, about 160 in number,

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that were purchased last year were kindly identified for us by Dr. S. E. Meek of the Field Columbian Museum. Eight specimens were collected and the same number donated.

THE INVERTEBRATES AND BOTANY.

The Invertebrates and Botany are treated of in the report of the curator of the department.

PALÆONTOLOGY.

The growth in the mammal department necessitated the removal from that hall of the restoration of the Colossochelys that was originally misplaced on that floor. The specimen is stored in the basement.

At the St. Louis Exposition we purchased a fine polished section of a coniferous tree trunk from the Arizona "petrified forest". This and a large photographic view of a portion of the "forest" and a printed account of the region and the causes producing the existing conditions have been placed by the large tree trunk, from the same region, long in the museum. The exhibit thus produced is of considerable interest.

A few good carboniferous arthropods from Mazon Creek, Ill. were purchased to fill a hiatus in the collections. 57 specimens were added by purchase and exchange and 371 by gift.

MINERALOGY AND GEOLOGY.

Quite a number of desirable specimens have been purchased and added to the collections during the year and one small case has been devoted to an exhibition of stalactitic and stalagmitic formations. A large nodule of torquoise was purchased, sawn in two and the two surfaces polished.

141 specimens were purchased, 2 acquired by exchange, 1 by collection and 362 by gift.

NUMISMATICS.

A new case for this exhibit has been made and the entire collection revised and placed on the third floor where it more

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properly belongs. It is remarkable how many people are interested in these objects. Frequently visitors are two deep on both sides of the case and they already have worn off the varnish on the front edges of the horizontal sashes. However, considering that the acquiring of money is the chief aim of many people the popularity of the exhibit is hardly surprising. The collection has already outgrown its case and when room can be found for another case it should be provided.

31 coins were purchased, 30 acquired by exchange and 134 by donation.

THE LIBRARY.

The report on this is given by the curator of the department.

BUILDING, EQUIPMENT, ETC.

The walls and ceiling of the main hall on the third floor having become very dingy they were calcimined. Those parts especially liable to defacement were painted.

A bronze tablet reading "Public Museum" was placed on the front of the building so that strangers might know its use. A grilled iron gate with spring lock was erected at the stairway leading from the rear hall to the basement so that visitors may not wander there. One engine has been overhauled, some parts renewed and the whole placed in good condition. Various additions of type have been made to our printing outfit, an electric lantern and opaque curtain have been installed in the lecture room, and a photographic dark room with electric ruby lantern, water and other conveniences installed in the basement. Various small additions of apparatus have been made in the several work rooms and close attention given to maintaining the plant in good repair. All is in very satisfactory condition with the exception of the taxidermists and janitors rooms in the basement which should not have been located there.

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I wish to call attention to the efficient work that has been done by the various members of the staff, without which the additions and improvements mentioned could not have been made.

Appended will be found the reports of the curators of invertebrate zoology and of books on their respective departments.

Various times it has been of interest to know the period during which an individual was on the board of trustees, the president of the board at a certain date, etc. For convenience of reference we have compiled a table from which any such data can readily be obtained.

The usual financial statements, inventory and lists of donations follow.

In closing I wish to express my appreciation for the uniform courtesy that I have met with at your hands.

Respectfully submitted,

HENRY L. WARD,

Director.

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Report of the Curator of Invertebrate Zoology.

In presenting my report of the past year's progress in the Department of Invertebrate Zoology I feel slightly handicapped in describing what was done during the six months prior to my connection with the museum. During that time the entire management devolved upon the director in addition to his many other duties. Until Miss Wheeler's resignation in November she spent a considerable portion of her spare time in arranging the mollusc collection, and from March until June Mr. Brown acted as assistant in the invertebrate and botanical sections. Since Mr. Brown's resignation no one has been appointed to fill this place.

Under the present arrangement the botanical collections are cared for by the curator of invertebrate zoology, as there is no professional botanist connected with the museum.

From the following detailed consideration it will be seen that our greatest needs lie in the line of matter illustrating the more simple forms of invertebrate life, and of attractive exhibits bearing on the higher groups. The need of an assistant is also felt, as all minor details at present need the personal attention of the curator.

MOLLUSCS.

Considerable progress has been made toward a proper arrangement of the exhibit collection in its systematic order, and large numbers of printed labels have been added to replace pen-written ones, at the same time bringing the nomenclature up to date.

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A number of species of shells new to the museum collection, as well as many duplicates, were contained in the Lapham collection recently donated to the museum. Most of these have been placed on exhibition. A collection of Californian shells given by C. P. Dadmun, has proved a welcome addition, as it contains many Pacific coast species new to the collection.

An interesting exhibit recently installed is a large piece of timber bored by the Ship-worm.

The study collection of local shells has been arranged so as to be accessible to any students who may wish to make use of it, and a card catalogue has been prepared embodying all data concerning the occurrence of the various specimens contained in the collection, which contains a good proportion of the species known to occur in Milwaukee County. All the work of identification has been done by Mr. G. H. Chadwick of Rochester, N. Y. The material was collected principally by members of the museum staff and by Mr. Chadwick during the summer that he spent with the museum.

Aside from the insects the mollusc collection is the largest of the invertebrate series, but it still lacks a number of representative forms which can be secured only by judicious purchasing. Aside from these, it would seem unwise to enlarge it at present owing to the crowded condition of the museum.

ARTHROPODS.

The insect collection has grown through various accretions during the year, numbering about 1,800 specimens, partly from collection by members of the museum staff and also by donations from various sources.

In its present condition the collection of North American Coleoptera is the most complete, containing over 5,400 species. The Lepidoptera are also well represented, but the species are not so accurately determined and the whole collection needs further study and revision. Most of the other orders are poorly represented and many specimens are not identified or are incor-

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rectly named. The Hymenoptera and Diptera especially need attention, and as rapidly as time will permit, these are being critically examined, identified and arranged. During the year a number of species have been determined for us by specialists at other institutions, and to reciprocate for these kindnesses, the curator has complied with similar requests from various entomologists and museums.

But little exchanging has been done owing to lack of time, although we have received offers from several sources.

The exhibit collection of North American butterflies and moths has been placed in systematic order and labeled. Later it is intended to change this into a local collection as the proper specimens can be obtained. The collection illustrating protective resemblance and mimicry has been rearranged, making use of a number of wax plants. This forms an exhibit of considerable popular interest. There have also been prepared two interesting groups, representing the habits and environment of the Trapdoor Spider and of the common Crayfish. In the future it is hoped to increase greatly the number of such groups following the method now adopted by all museums in portraying mammal and bird life. Such exhibits when provided with a good descriptive label arouse a dormant interest which will usually pass unawakened by a long series of dried or alcoholic specimens without attractive surroundings.

A collection of injurious insects has been started and will be added to as it may become possible to acquire the necessary material.

OTHER INVERTEBRATES.

The title of this paragraph speaks for itself, representing as it does a series of large and important groups of animals, each of which should have separate and complete treatment and representation in the museum. Unfortunately at the present time most of these, with the exception of the more showy corals and sea fans, are lacking.

Some of these groups comprise minute animals which can

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find their place in a museum only as models, photographs, drawings, etc. These entail a considerable outlay, both of money and labor, and must be acquired slowly. It is to be hoped, however, that we may see our way clear in the near future to make a good start in this direction, for without an exhibit of these simple lower animals it is impossible to evolve the proper sequence of zoological facts which should be presented in a well balanced museum collection of invertebrate animals.

An exhibit which has met with popular favor during the year is the salt-water aquarium containing living coral and sea-anemones. Sea lettuce is kept with them to form a balanced aquarium, and but little attention has been necessary to keep the animals in good condition.

Many of the specimens of Echinoderms, worms, etc., have been more satisfactorily mounted and the identifications confirmed as nearly as possible.

BOTANY.

The work of remounting and labeling the specimens in the herbarium of North American plants is still in progress. During the past year about 2,000 plants have thus been prepared. Those which are at present mounted and identified have been stored under a temporary arrangement so as to be accessible pending the final mounting of the present collection. This will probably require two years or longer.

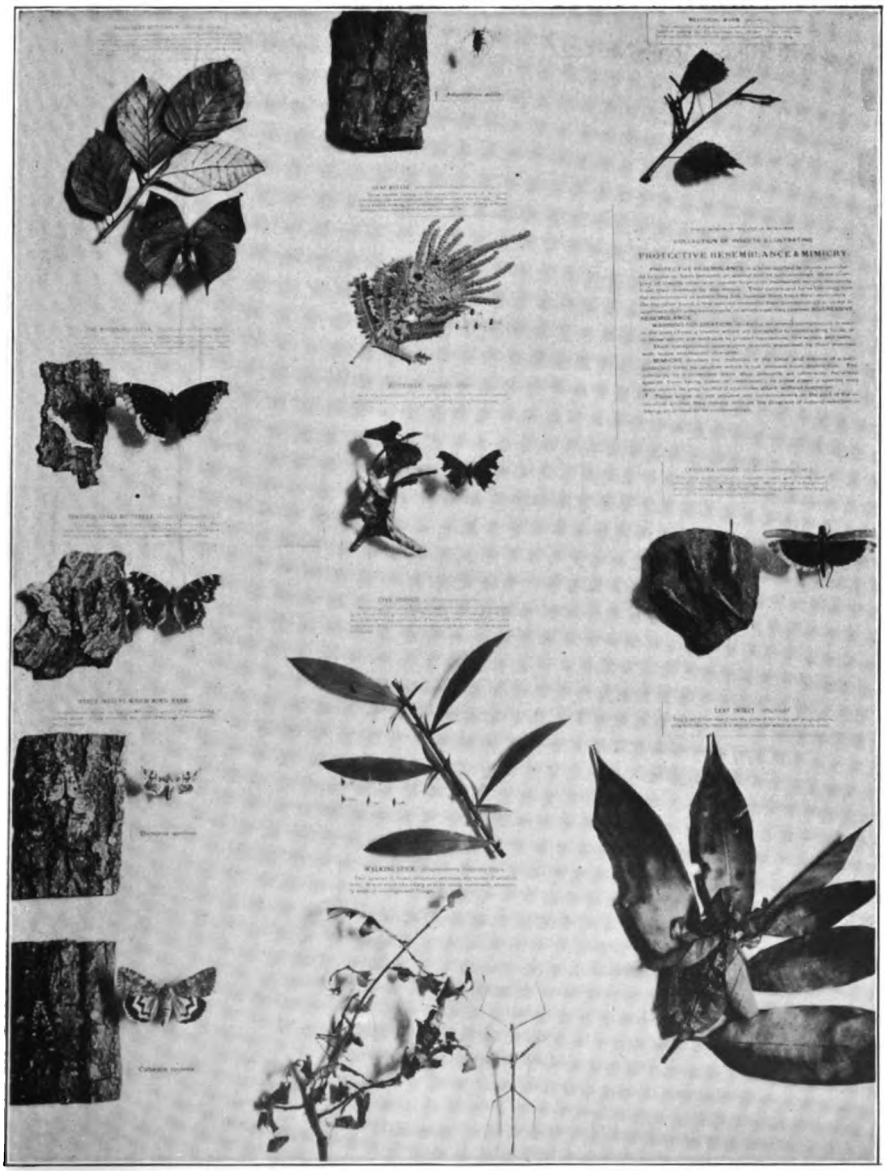
The exhibit collection of local mushrooms is in good condition, having been renovated by Mr. Brown during the winter. It is now completely provided with printed labels.

Accessions to the botanical collections during the year have come principally from trips made by members of the museum staff, as well as by a few donations from outsiders.

The case of wild flowers maintained in the hall is still popular and has been well supplied with the common wild flowers since the earliest spring ones made their appearance.

C. T. BRUES,
Curator of Invertebrate Zoology.

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PORTION OF CASE ILLUSTRATING PROTECTIVE RESEMBLANCE AND MIMICRY OF INSECTS.

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Report of the Curator of Books.

In July, 1902, upon the recommendation of the director, the Board of Trustees resolved to make the museum's reference library more useful by the introduction of a library card catalogue. The director thereupon was authorized to proceed immediately with the work by engaging the services of an expert cataloguer. The library at that time consisted of about 9000 volumes and pamphlets. After it had been agreed upon to adopt the Dewey system Mr. H. E. Haferkorn of this city was entrusted with the classification and cataloguing of the library. During the eight months service of Mr. Haferkorn all the books and pamphlets were classified, arranged on the shelves, and an author and subject card catalogue prepared, but time did not permit him to take up the analytical work to any great extent.

The classification and cataloguing of the library being advanced so far the director decided to have the work continued by a regular museum employe, and as at that time a change in the distribution of the work among the employes was just in progress, the work was allotted to me. It seemed, however, that the system adopted was not far-reaching enough for a catalogue for strictly scientific purposes and before taking up any more analytical work it was thought expedient to inquire at other institutions for the best method of cataloguing a scientific library. At that time I had an opportunity to go east and while there devoted part of my time to visiting the American Museum of Natural History of New York and the Brooklyn Institute of Arts and Sciences for the purpose of making inquiries into their method of cataloguing scientific literature. In the museum of natural history in New York I

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was directed to Miss Hood, the assistant librarian. Miss Hood courteously and very willingly devoted part of her time to a conversation upon the classification and cataloguing of scientific libraries and also showed me their catalogue and explained how to proceed under the system they had adopted and catalogued for me a number of articles, demonstrating thereby how the work must be done. Ever since that time she has cheerfully assisted me by correspondence, in answering questions and explaining more difficult cases, and from each of her letters I am convinced that she will do so in the future.

In the Brooklyn Institute I was introduced to Miss Hutchinson, the curator of books. Miss Hutchinson, on learning the object of my visit, showed me their catalogue, explained the system they had adopted and gave me much valuable advice as to the method of cataloguing scientific literature. Miss Hutchinson also revised a number of library catalogue cards for me.

Both of these institutions very highly recommended for a catalogue for museum purposes the Haviland Field System known as the "Concilium Bibliographicum" which in its character may be considered a finer classification of the original decimal classification by Melvil Dewey.

It would be rather ungrateful on my part if I would not embrace this opportunity to express to Miss Hood and Miss Hutchinson great appreciation for the kind manner with which they have received me, and for the very valuable assistance they rendered me in connection with the work of cataloguing our library.

The work which has been done will show you how far we have advanced in adjusting the old catalogue cards under the system we have finally adopted. We have adjusted 7,810 author cards, 11,663 subject cards and 1,162 guide cards. For each of these cards the proper subject number had to be looked up and written on the card. There are still over 3,500 cards awaiting adjustment. We have classi-

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ENVIRONMENTAL GROUPS OF INVERTEBRATES.
TRAP-DOOR SPIDER ABOVE, COMMON CRAYFISH BELOW.

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fied and labeled 753 new volumes and pamphlets, and have catalogued or analyzed the publications of some of the leading museums and societies of the United States. We have written about 3,200 new cards and have adjusted under the new system the greater part of the cards received from the U. S. Department of Agriculture.

Under the present system of cataloguing we have attempted to catalogue the newly described species which will doubtless be of great advantage to scientific workers consulting this catalogue. The cataloguing of new species is an interminable undertaking and yet the time and labor devoted to this work will be considered well spent by those who shall have occasion to consult this catalogue for the identification of new material. For the cataloguing of new species in accordance with the divisions of the various conspecti it is essential that the museum library should have in its possession the latest reference works so as to enable the cataloguer to trace the newly described species to their proper position in the classification adopted.

During the year just ended we have expended for the purchase of new books, for binding and library card catalogue supplies the sum of $230.50.

We are in need of more shelf room for the reception of new books which are being received daily, the present available space being occupied to its utmost capacity. If only one additional book stack could be added at present we would be able to get along for some time to come.

All of which is respectfully submitted.

CARL THAL,
Curator of Books.

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INVENTORY.

7,146	Mineralogical and geological specimens.
15,130	Palaeontological specimens.
24,412	Botanical specimens.
851	Protozoans, sponges, corals, echinoderms, etc.
96,597	Mollusks.
55,905	Insects (estimate).
346	Crustaceans.
390	Fishes.
1,077	Batrachians and reptiles.
7,899	Birds.
6,223	Birds' eggs and nests.
1,380	Mammals.
20,490	Archaeological specimens.
4,109	Ethnological specimens.
3,018	Arms, armors, carvings and other objects of virtu, contained in the Rudolph J. Nunnemacher collection.
3,243	Coins, bank notes, medals, etc.
11,808	Books, pamphlets, maps, etc.
260,024	Total number of specimens.

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FINANCIAL STATEMENT OF THE MUSEUM.

Debit.

Balance in Museum fund, Sept. 1, 1904.....	$10,662 74
Refunded from various sources.....	152 81
Appropriation to Museum fund, Jan. 1, 1905...	26,331 67
	$37,147 22

Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:		
Anthropology and ethnology.....	$778 38	
Birds	22 43	
Botany	28 72	
Building repairs.....	11 22	
Cleaning supplies.....	122 37	
Fossils and casts.....	186 13	
Furniture	1,177 48	
Gas (Museum).....	11 52	
Insurance	36 67	
Invertebrates	3 84	
Library	230 50	
Mammals	69 45	
Minerals and rocks.....	87 25	
Miscellanies	89 16	
Payroll	17,897 57	
Permanent improvements	505 98	
Postage and freight.....	232 31	
Power department (fuel).....	1,847 59	
Power department (gas).....	19 80	
Power department (material).....	91 56	
Power department (repairs).....	89 67	
Preparation supplies.....	255 56	
Stationery and printing.....	413 74	
Telephone	72 00	
Traveling expenditures.....	330 85	
Wages	473 19	
Water	83 60	
		25,168 54
Balance in Museum fund Sept. 1, 1905.....		$11.978 68

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FINANCIAL STATEMENT OF THE RUD. J. NUNNEMACHER FUND.

Debit.

Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1904	$1,118 58
Paid over to City Treasurer by the Rud. J. Nunnemacher estate, Nov. 7, 1904	1,500 00
Paid over to City Treasurer by the Rud. J. Nunnemacher estate, Dec. 31, 1904	1,500 00
Annual interest paid to City Treasurer, Dec. 31, 1904	280 20
	$4,398 78

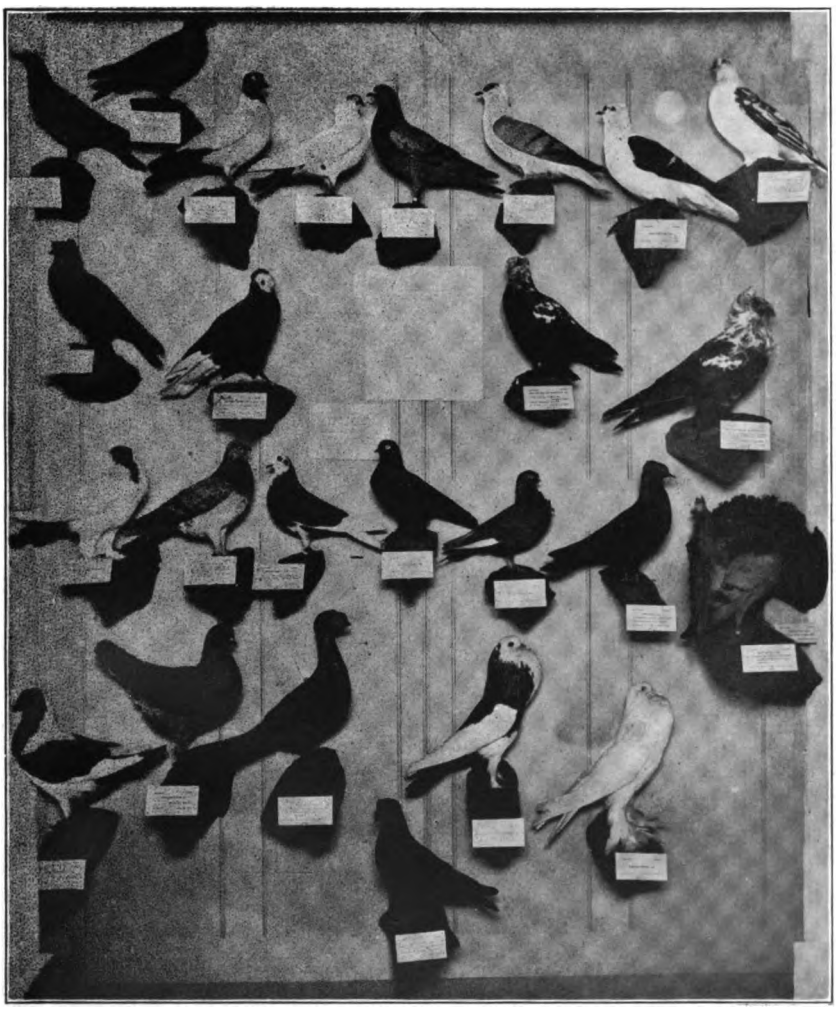
Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered	$3,491 50
Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1905	$907 28

LIST OF INSURANCE.

Fire Association of Philadelphia	$2,000 00
Home Insurance Co., New York	7,000 00
National Union Fire Insurance Co., of Pittsburgh	2,000 00
Phenix Insurance Co., of Brooklyn, N. Y	2,000 00
The Concordia Fire Insurance Co., of Milwaukee, Wis	4,500 00
The Germania Fire Insurance Co., Pittsburgh, Pa	2,500 00
The Spring Garden Insurance Co., Philadelphia	2,000 00
Total	$22,000 00

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EVOLUTION BY ARTIFICIAL SELECTION, PIGEONS.

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Register of Trustees, Presidents of Boards and Directors of Museum from its Founding.

TRUSTEES OF THE PUBLIC MUSEUM.

Period of Service.

F. C. Winkler.....1883-1891
Ch. Preusser.....1883-1894
Adolph Meinecke.....1883-1901
Thos. A. Greene.....1883-1896
*August Stirn.....1883-1884
August Stirn.....1891-1899
*C. H. Swan.....1883-1884
*Thos. H. Wood.....1883-1885
†Joshua Stark.....1883-1884
‡James McAlister.....1883-1884
†Paul Bechtner.....1884-1885
*Paul Bechtner.....1886-1889
‡W. E. Anderson.....1884-1892
*Thos. H. Malone.....1884-1887
*Wm. Rauschenberger.....1884-1886
†Wm. Rauschenberger.....1889-1890
†John L. Mitchell.....1885-1886
*John McGee.....1885-1888
†Geo. J. Obermann.....1886-1889
*W. F. Kraus.....1886-1887
*Chas. E. Meyer.....1887-1889
*Oscar Altpeter.....1888-1890
*Paul Muenzberg.....1889-1891
*Thos. F. Ramsey.....1889-1892, 1894-1898
*John Guerin.....1890-1892
†Wm. Geuder.....1890-1892
*Theo. Otjen.....1891-1894

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*Herman Fehr.....1892-1894
*F. Niezorawski.....1892-1894
‡Geo. W. Peckham.....1892-1896
†W. J. Turner.....1892-1894
Julius Goldschmidt.....1894-1898
*Chas. Koehler.....1894-1896
*James R. Williams.....1894-1896
†James M. Pereles.....1894-1895
E. W. Bartlett.....1895-1900
†Julius Bleyer.....1895-1896
*W. H. Stevens.....1896-1898
*Herman Buth.....1896-1898
†A. J. Lindemann.....1896-1897
Chas. L. Kiewert.....1897-1902
‡H. O. R. Siefert.....1896-1904
†Chas. Quarles.....1897-1898
*Henry Smith.....1898-1900
*Geo. Thuering.....1898-1900
*Wm. Murphy.....1898-1904
†F. M. Hoyt.....1898-1899
E. W. Windfelder.....1899
†B. F. Zinn.....1899-1900
Robt. Nunnemacher.....1900
*E. F. Deuster.....1900-1902-1904
*E. J. Hansen.....1900-1902
†G. W. Augustyn.....1900-1901
*C. J. Fitzgerald.....1902-1904
*T. J. Pringle.....1902
Fred. Grossenbach.....1902
Ferd. Meinecke.....1901
†H. H. Schwarting.....1901-1902
†J. A. Sheridan.....1902-1903
†Jeremiah Quin.....1903-1904
*R. B. Mallory.....1904
‡C. G. Pearse.....1904
†A. G. Wright.....1904-1905
†A. S. Lindemann.....1905

* Aldermen,
† Presidents of Boards of School Directors.
‡ Superintendents of Schools.

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PRESIDENTS OF THE BOARD OF TRUSTEES.

Period of Service.

F. C. Winkler.....1883-1891
William Geuder.....1891-1892
Geo. W. Peckham.....1892-1896
E. W. Bartlett.....1896-1900
E. W. Windfelder.....1900

DIRECTORS OF THE MUSEUM (Formerly Called Custodian).

Chas. H. Doerflinger.....Feb., 1883, to Sept., 1887
Wm. M. Wheeler.....Oct., 1887, to Aug., 1890
Henry Nehrling.....Sept., 1890, to July, 1901
Henry L. Ward..... April, 1902

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APPENDIX

ACCESSIONS TO THE MUSEUM AND ITS LIBRARY

Donors are citizens of Milwaukee unless otherwise noted, and where no localities to specimens are given, the State of Wisconsin is to be understood.

ZOÖLOGY.

Donations.

Aschermann, A. F.
- 1 Bullfinch, — Europe.
- 5 Finches, — Africa.

Bacon, Miss Gertrude.
- 1 Nest and egg of Chipping Sparrow.

Bacon, E. N.
- 1 Nest of Catbird.
- 1 " " Chipping Sparrow.

Baer, Geo.
- 1 Brown Creeper,
- 1 Junco,
- 1 Olive-backed Thrush,
- 1 Sora.

Bass, Mrs. R. W., Fond du Lac, Wis.
- 1 Unio, after cutting of button blanks.

Baumbach, Miss Elsie.
- 1 Caterpillar.

Baumbach, Moritz von.
- 1 Euplectella, — Japan.
- 1 Red Coral, — Pacific Ocean.
- 1 Trap-door Spider's Nest, — California.

Bellinghausen, Arthur.
- 1 Insect.

Bennett, Van S., Rockton, Wis.
- 3 Caribou, — Newfoundland.

Bertschy, Albert.
- 1 Mud Turtle,
- 1 Northern Pileated Woodpecker.

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Bradford, Miss Elizabeth F.
1 Canadian Warbler.
Brandler, Chas.
2 Meadow Larks.
5 Prairie Dogs and 2 Skulls, Colorado.
4 Small birds, Hawaiian Islands.
1 Surf Scoter, Puget Sound, Wash.
Brandler, Walter.
2 Sharp-shinned Hawks.
Broich, Mrs. Hugo.
1 Wasp Nest.
Brown, Abe.
1 Chipmunk,
2 Fox Squirrels,
21 Gray "
2 Lilac Moths,
1 Screech Owl.
Brown, Chas. E.
6 Fresh Water Shells.
Brown, Sherman.
1 Double-crested Cormorant,
3 Hooded Mergansers.
Brues, Chas. T.
600 Flies, representing 193 species, Various localities.
26 Insects, Austin, Tex.
Brummer, W. F.
1 Turkey Buzzard.
Carpenter, James,
1 Bittern.
Cohen, Ben.
1 Chewink.
Dadmun, C. P., California.
1 Lot of Shells, California.
De Moe, Miss Lettie.
1 Northern Flicker.
Denman, Miss Eleanor.
1 Dobson Fly.
De Vaney, Ed.
1 Insect.
Dickinson, L. J.
1. Paper Wasp Nest.

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Domakowski, Paul.
1 Toad.
Du Guerre, Miss Effie.
1 Caterpillar.
Ellis, A. G.
1 White Pelican.
Ellsworth, W. H.
2 Crayfish Chimneys.
1 Northern Pileated Woodpecker.
Fischer, Miss Minnie.
1 Rose-breasted Grosbeak.
Fitzgibbon, John, Jacksonport, Wis.
1 Chimney Swift.
Fritsche, Gustav.
1 Black-poll Warbler.
Gottschalk, E.
1 Double chicken egg.
Graenicher, Dr. S.
231 Bees. Various localities.
1 Insect.
Grant, Harry.
1 Butterfly.
Groendal, Miss Louisa.
1 Olive-backed Thrush.
Grueder, Miss Gertrude.
1 Black and White Warbler.
Halsey, P. L.
4 Insects.
Heer, J. P.
1 Blue Fantail Pigeon.
1 Red-Carrier "
1 Red Helmet "
Henne, Peter.
1 Song Sparrow.
Henning, Henry.
2 Cedar Waxwings.
Heyn, Louis.
1 Night Hawk.
Holdman, Charlie.
2 Garter Snakes.

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Horton, S. C.
1 Northern Flicker.
Howard, Dr. L. O., Washington, D. C.
2 Yellow Fever Mosquitoes. Texas.
Hunter, W. D., Dallas, Texas.
1 Lot of Specimens, illustrating life history of Boll-Weevil. Dallas, Tex.
Johnson, Wm. B.
1 Butterfly.
Keipper, A. L.
1 African Owl Pigeon.
1 Archangel "
1 Black Dragoon "
1 Black Fantail "
1 Black Nun "
1 White Turbit "
Kindt, Karl.
1 Horned Toad, Captivity.
Lapham Family.
176 Shells.
Laue, A. F.
1 Corn Snake.
1 Sora.
Laur, Mrs. Paulina.
1 Gray-cheeked Thrush.
LeClair, Andrew, Jacksonport, Wis.
1 Wood Pewee.
Lewis, James.
1 Marsh Hawk.
Lewis, Percival F.
1 Dragon Fly.
Lukens, Ned.
1 "Walking Stick."
Mann, Chas. L.
1 Deer Antler, partially destroyed by rodents.
Martin, Wm. J.
1 Hoary Bat.
1 Pintail.
Merget, Jacob.
1 Blue-Pied Pigmy Pouter Pigeon.

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New York Aquarium, New York City.
Living specimens of Coral, Astrangia danæ, a number of individuals of two species of sea anemones, sea lettuce and water, New York.

Norris, R. H.
2 Sets of Shark's teeth, Coast of Yucatan.
1 Wood Duck.

Ochsner, E. D., Prairie du Sac, Wis.
13 Young game birds.

Rader, Frank C.
1 Double-crested Cormorant.

Ramstack, Jr., Geo. F., Elm Grove, Wis.
1 Turkey Buzzard.

Redlin, Henry.
2 Live Mud Turtles.

Rodee, W. I.
1 Black-bellied Plover.
1 Red-tailed Hawk.

Rohde, Paul C.
1 Bluebird.
1 Double-crested Cormorant.
24 Insects.
47 Shells.
1 Towhee.
4 White-footed Mice.

St. Francis Seminary, St. Francis, Wis.
1 Virginia Deer, young.

Schluenz, Dr. R. A., Abrams, Wis.
1 Blue-winged Teal.
1 Yellow-headed Blackbird.

Schoenebeck, A. J., Kelley Brook, Wis.
1 Nest of Cedarbird.

Schoenebeck, Carl, Lena, Wis.
2 Sparrow Hawks.

Schubert, Walter.
1 Luna Moth.

Shamp, E. G., Ashland, Wis.
3 Double-shelled hen's eggs.

Shimonek, Miss, Conover, Wis.
1 Hairy Woodpecker.
1 Red Squirrel.

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Shrosbree, Geo.

1	Anhinga,	Marion Co., Fla.
1	Boat-tailed Grackle,	" " "
1	English Pheasant, young,	Rochester, N. Y.
1	Golden Seabright Bantam,	Chicago, Ill.
3	Green Herons,	Washington, D. C.
4	Hawk Moths.	
1	Marsh Hawk.	Dexter,Mich.
1	Meadow Lark.	
1	Northern Flicker.	
5	Red-headed Woodpeckers.	
1	Skull of Alligator,	Southern States
1	Yellow-bellied Sapsucker.	

Shrosbree, Mrs. Geo.

1 Flying Squirrel and nest.

Smith, Miss Mary.

1 Black and White Warbler.

Smith, Perry,

1 Ovenbird.

Southers, Mrs. Margaret.

1 Mourning Dove.

Stewart, I. N.

1 Piece Toredo bored wood, California.

Stirn, August.

3 Shells.

Struck, Walter.

1 Silver Black Bat.

Stuhlman, Paul.

1 Butterfly.

Sturgeon, O. C.

7 Brook Trout.

Thomas, Theo. A.

1 Bittern,
3 Black Terns.
2 Coopers Hawk eggs.
2 Coots.
2 Florida Gallinules and 4 young.
2 Horned Grebes.
1 Loon.

Thurow, Hilbert.

1 Luna Moth.

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Tonn, Henry, Waukesha, Wis.
13 Fresh water Clams.
Trapp, Arthur.
2 Garter Snakes.
Trowbridge, Mrs. W. E.
114 Shells, Various localities.
Wakefield & Shawvan.
1 Blue-checkered Homing Pigeon.
1 Tippler Pigeon.
Ward, Henry L.
1 Magnolia Warbler.
5 Mammal skins, New York and Mexico.
1 Meadow Lark.
3 Red-headed Woodpeckers.
5 Towhees.
3 White-throated Sparrows.
Ward, Mrs. Henry L.
1 Slate-colored Junco.
Ward, Henry S.
1 Olive-backed Thrush.
1 Ruby-crowned Kinglet.
Ward, Miss Marian E.
1 Gray-cheeked Thrush.
Weber, Frank.
1 Screech Owl.
Wepfer, A.
1 Nubian Baboon, Captivity.
West Pascagoula Creosoting Works, West Pascagoula, Miss.
1 Spile bored by Teredo, Gulf of Mexico.
Wiesner, Herman.
1 Butterfly.
Wuesthoff, Fred.
1 American Osprey.

Museum Expeditions.

194 Birds,
26 Crustaceans.
76 Eggs and nests.
1,158 Insects.
16 Mammals.
8 Reptiles and Batrachians.
346 Shells.

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Acquired by Exchange.

161 Insects, Various localities.

Acquired by Purchase.

1 Albino Robin.
50 Lepidoptera for school collections, Various localities.
1 Lynx.

BOTANY.

Donations.

Brown, Chas. E.
19 Mushrooms.
Ellsworth, W. H.
30 Bracket Fungi.
2 Cones of long-leaved Yellow Pine, Louisiana.
1 Mushroom, Hammond, La.
12 Mushrooms.
Fernekes, Val.
2 Mushrooms.
Lapham Family.
25 Botanical specimens.
McKenna, F. E.
1 Mushroom.
Missouri Botanical Garden, St. Louis, Mo.
1 Cactus, Opuntia cochinilifera, St. Louis.
Neuman, J. J., Bangor Wis.
16 Mushrooms.
Schnetzky, H. P.
1 Plant.
Stirn, August.
4 Specimens cotton, showing closed and open bolls, Georgia.
1 Specimen peanut vine with nuts on roots, "
Summers, M.
1 Mushroom.
West, Geo. A.
1 Mushroom.
Wisconsin Mycological Society.
66 Mushrooms.

Museum Expeditions.

138 Mushrooms.
212 Sheets of phanerogams.

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PALÆONTOLOGY.

Donations.

Crittenden, J. H.
1 Chain Coral.
Koerner, G. J.
1 Tusk of Mammoth, Alaska.
Lapham Family.
369 Fossils.
Schindler, J. F.
1 Trilobite, British Columbia.

Acquired by Exchange.

50 Fossils.

Acquired by Purchase.

7 Fossils, Various localities.

MINERALOGY AND GEOLOGY.

Donations.

Baumbach, Moritz von.
1 Bowerite, Smithfield, R. I.
Baumgart, H. P.
1 Quartz Geode, containing chalcedony, Warsaw, Ill.
2 " " " calcite crystals, " "
Bossert, O. H.
1 Grahamite? Colorado.
Brown, Chas. E.
1 Fulgurite.
1 Glaciated limestone.
Burkhart, Geo.
1 Galena.
Crittenden, J. H.
1 Amethyst, Localities unknown.
1 Calcite incrusting gravel, " "
4 Copper ore, " "
1 Quartz geode, " "
1 " curved, milky crystal, " "
Henne, Peter.
4 Specimens of copper, Michigan?
Lapham Family.
317 Rocks and minerals.

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Lewis, Percy.
1 Calcite, lumachelle, Colorado.
McCartey, J. F.
1 Incipient lignite, Minnesota.
McCormack, Smith, Wauwatosa, Wis.
1 Quartz, massive.
Newton, Ralph E.
2 Specimens of copper, Morenci, Ariz.
Perkins, E. C., Prairie du Sac, Wis.
1 Stalagmitic onyx ball.
Schulz, August.
1 Muscovite, South Dakota.
Stelzel, Edwin.
1 Limonite.
2 Micaceous hematite.
Teller, E. E.
1 Asphaltum in cement rock.
Tripoli Mining Co., Mineral Point, Wis.
1 Specimen lead and zinc ore.

Museum Expeditions.

1 Stalagmite.

Acquired by Exchange.

1 Gold concentrate, Alaska.
1 Quartz with rutile, polished, North Carolina.

Acquired by Purchase.

99 Specimens. Various localities.

ARCHÆOLOGY.

Donations.

Newton, Ralph E.
15 Potsherds.
Nolden, J. J.
1 Pottery pipe, Mexico.
Southers, Frank T.
1 Flint scraper.
Ward's Natural Science Establishment, Rochester, N. Y.
1 Cast of Chelean axe, Amiens, France.

Museum Expeditions.

27 Specimens, Various localities.

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PALÆONTOLOGY.

3 Specimens, Various localities.

Acquired by Purchase.

360 Specimens, Various localities.

ETHNOLOGY.

Donations.

Barr, W. H.

1 Appointment of Frank Barr as Second Lieutenant by Abraham Lincoln.

1 Appointment of Frank Barr as First Lieutenant by Abraham Lincoln.

1 Appointment of Frank Barr as Captain by U. S. Grant.

Boruta, John.

1 Ulster County (N. Y.) Gazette, Jan. 4, 1800.

Burton, John E.

1 Cake Siberian tea, Alaska.

Crittenden, J. H.

1 Indian moccasin, Locality unknown.

1 " rattle, " "

Dadmun, C. P., California.

1 Morning Report of Prisoners at the C. S. Military Prison, Richmond, Va., 1865.

1 Stage Coach Ticket, Boston, 1838.

Ellsworth, W. H.

1 Indian animal figurine, lead, Bedford, N. Y.

1 Skin scraper, South Dakota.

Lapham Family.

3 Relics.

Stearns, Jacob.

1 Bill of Sale for Negro (blank).

1 Confederate Soldier's Passport (blank).

Acquired by Purchase.

428 Specimens, Various localities.

NUMISMATICS.

Donations.

Bray, Jaspar.

1 Five dollar bank bill, 1825, New Jersey.

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Burnell, Miss F. N.

1	One Ore, 1870,	Norway.
1	Two cents, 1871,	United States.
3	War tokens,	" "

Chandler, G. A.

1	One centavo, 1903,	Mexico.

Christis, Nick,

1	Twenty Aenta. 1895,	Greece.

Crittenden, J. H.

50	Miscellaneous coins,	Various countries.

Deuster, Emil F.

1	Five cents scrip, 1896,	Cuba.
1	Ten " " 1897,	"
1	Twenty " " 1897,	"

Dickens, F. W.

1	One dollar bill, Northern Indiana R. R. Co. 1854.	United States.

Eichfeld, Henry E.

1	One cent, copper, 1902,	United States.
1	One centavo, 1881	Central America.

Hodgman, C. W.

1	One Krajczar, 1893,	Hungary.

Hohl, Mrs. Carolina.

1	Eight reals,	Peru.

Kownacki, W.

1	One kopeck, 1901,	Russia.

Majewski, Emil.

1	Decoration from Russo-Turkish War,	Russia.

Moix, Miss Hortense, Lost Lake, Wis.

1	Ten centimes, 1854,	France.

Nunnemacher, Robert.

1	One dollar, gold, 1873,	United States.
1	Two dollars and fifty cents, gold, 1901,	" "

Paradis, Mrs. J. E.

1	One centime, 1895,	France.
1	Five " 1897,	"
1	Fifty " 1898,	"

Pulli, F. T.

1	One penni, 1901,	Finland.
1	Twenty-five pennia, 1889,	"

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Rohde, Paul C.

1 Five cents nickel, 1903, United States.
1 " " " 1904, " "

Spicer, Earl.

1 Diez centavos, 1897, Cuba.

Stearns, Jacob.

1 Iron Cross (German Decoration), Germany.

Tesch, John H.

1 One cent, 1904, (direct from mint), United States.
1 Five cents " " " "
1 Ten " " " " "
1 Twenty-five cents, 1904 " " "
1 Fifty " " " " "
1 One dollar, " " " "

Voechting, Chr.

16 Coins, Foreign countries.

Ward, Henry L.

25 Coins, U. S. and Foreign countries.

Wenzel, Leo A.

1 War token, 1863, United States.

Windfelder, E. W.

1 Two kopecks, 1902, Russia.

Acquired by Exchange.

30 Coins, U. S. and Foreign countries.

Acquired by Purchase.

7 Coins, Philippines.
24 One cent coins, early issues, United States.

NUNNEMACHER COLLECTION.

Donations.

Nunnemacher, Mrs. Amelia.

1 Bible, binding with silver edges and clasps, published in 1618 and 1619, Dordrecht, Holland.

Nunnemacher, Robert.

1 Rifle, Lee's Fire Arms Co., Milwaukee, 1862.

Acquired by Purchase.

11 Baskets, Alaska.
1 Battle Axe, India.
1 Breech cloth, woven of vegetable fiber, Marshall Islands.
1 Carved meerschaum pipe, Germany.

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5	Engraved cylinders, excavated near the River Euphrates at Tel Oo,	Arabia.
3	Engraved seals, excavated near the River Euphrates at Tel Oo,	Arabia
1	Fisherman coming home, bronze,	Japan.
1	Hand stove,	"
1	Ivory carving of angler,	"
1	" " " crocodile,	"
1	" " " elephants crossing a bridge.	"
-	" " " pigeons (14 on wood base),	"
1	Lafaucheaux pistol,	France.
19	Modern artifacts,	Turkey.
1	Portrait of Egyptian mummy in wax, painted about 2,000 years ago,	Egypt.
1	Revolver,	Montreal, Can.
1	Silver wire and lacquer used by Japanese in manufacture of cloisonne work,	Japan.
1	Spearhead, trident,	India.
101	Specimens, mainly arms and armor,	Philippines.
15	" " " " "	Soudan.
76	" " " , articles of personal adornment and domestic use,	Upper Congo.
1	Two carp, bronze,	Japan.
1	Vase, with fox in bas relief, bronze,	"
1	Watch, year of 1780,	London, Eng.
1	Wooden temple bell (Moking yo),	Japan.

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Twenty-Fourth Annual Report

of the

BOARD OF TRUSTEES

of the

PUBLIC MUSEUM



of the

CITY OF MILWAUKEE

SEPTEMBER 1, 1905, TO AUGUST 31, 1906

NOVEMBER 1, 1906

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TWENTY-FOURTH

ANNUAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

PUBLIC MUSEUM



OF THE

CITY OF MILWAUKEE.

SEPTEMBER 1, 1905, TO AUGUST 31, 1906

NOVEMBER 1, 1906

MILWAUKEE
THE EDW. KEOGH PRESS, BROADWAY
1906

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O. J. Habhegger, - - - - - - Term expires May 1910
Ferdinand Meinecke, - - - - - - Term expires May 1909
Robert Nunnemacher, - - - - - Term expires May 1908
Edward W. Windfelder, - - - - - Term expires May 1907

ALDERMEN APPOINTED.

Henry Smith, - - - - - - - Term expires May 1908
Chas. B. Weil, - - - - - - - Term expires May 1908
Henry Stoetzer, - - - - - - - Term expires May 1908

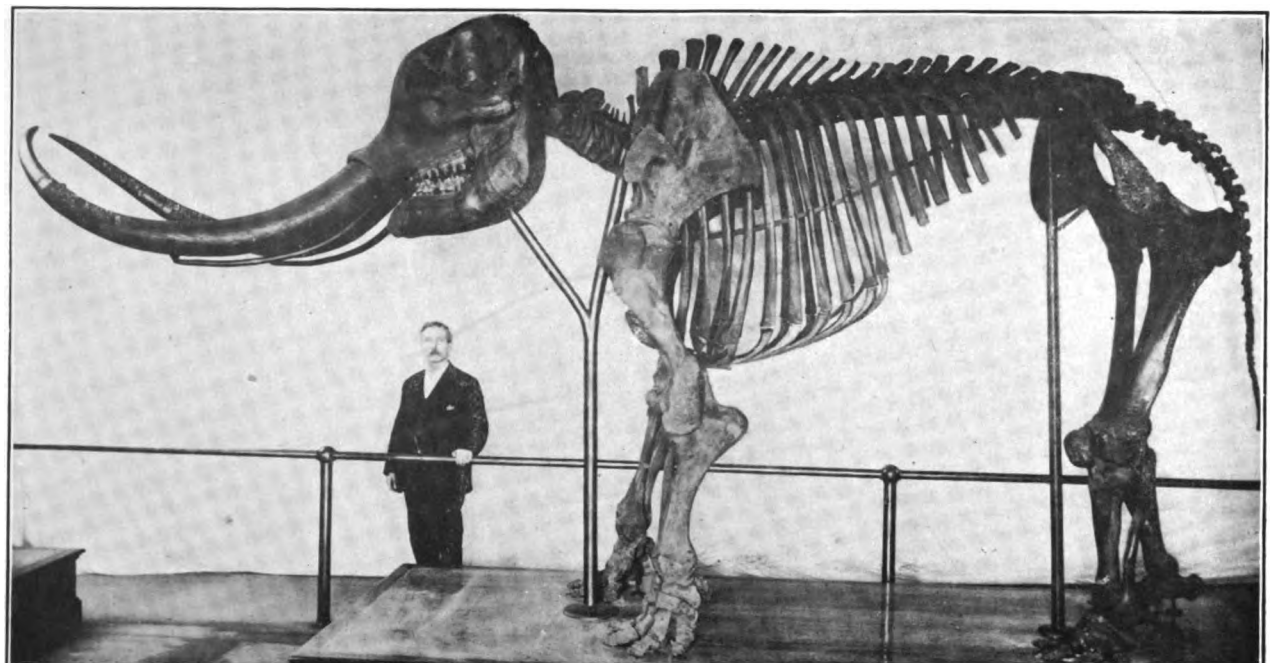
EX-OFFICIO.

C. G. Pearse, Sup't of Schools, - - Term expires May 1907
A. S. Lindemann, Pres't of School Board, Term expires July 1907

OFFICERS.

Edward W. Windfelder, President.
Henry L. Ward, Secretary, Ex-Officio.

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SKELETON OF MASTODON.

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EXECUTIVE.

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A. S. Lindemann,
O. J. Habhegger,
Chas. B. Weil,
Edward W. Windfelder, Ex-Off.

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Ferd. Meinecke, Chairman,
Henry Stoetzer,
Robert Nunnemacher.

FURNITURE.

O. J. Habhegger, Chairman,
C. G. Pearse,
A. S. Lindemann.

EXCHANGING.

Henry Smith, Chairman,
Ferd. Meinecke,
O. J. Habhegger.

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C. G. Pearse,
Henry Smith,
Chas. B. Weil.

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Henry Stoetzer,
Robt. Nunnemacher,
Edward W. Windfelder, Ex-Off.

FINANCE.

Ferd. Meinecke, Chairman,
Henry Stoetzer,
Henry Smith.

Henry L. Ward, Advisory Member of All Committees.

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Honorary Curators

Dr. S. Graenicher, - - - - Ichthyology and Herpetology
Carl Hagenbeck, Hamburg, Germany, - - - - - Zoölogy
Albert von Hoffmann, - - - - - - - - Archeology
Chas. E. Monroe, - - - - - - - - - Paleontology
A. J. Schoenebeck, Kelley Brook, Wis., - - - - - Oölogy
August Stirn, - - - - - - - - - - - Ornithology

Museum Service

Henry L. Ward, - - - - - - - - - - Director
Chas. T. Brues, - - - - Curator of Invertebrate Zoölogy
Carl Thal, - - - - - - - - - Curator of Books
Wm. B. Brickner, - - - - - - - - Special Clerk
Charles Brandler, - - - - - - - - - Taxidermist
Geo. Shrosbree, - - - - - - - - - Taxidermist
Paul C. Rohde, - - - - - - - Assistant Taxidermist
Herbert Clowes, - - - - - - - Landscape Modeler
Henry E. Eichfeld, - - - - - - - - - Attendant
R. A. Muttkowski, - - - - - - - - - Attendant
Lydia Nehrling, - - - - - - - - - - Attendant
Alice Pluck, - - - - - - - - - - Attendant
Phillip J. Pier, - - - - - - - - - - Janitor
Fred. C. Ruck, - - - - - - - - Chief Engineer

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Report of the President of the Board of Trustees.

Milwaukee, Wis., Oct. 3, 1906.

To the Honorable the Common Council of the City of Milwaukee.

Gentlemen—The Board of Trustees of the Public Museum of the City of Milwaukee herewith presents to you its annual report of the year ending August 31st last, being the twenty-fourth of its annual series of reports, as required by Section 8 of Chapter 328 of the Laws of Wisconsin of 1882.

The board has held a meeting each month of this period at which it has transacted the business necessary to the conservation of the best interests of the museum.

Last December, upon the recommendation of the Director of the Museum, the board passed the necessary rule allowing of the museum being open on all legal holidays, so that now there is not a day in the entire year but that citizens and visitors to our city can find pleasurable entertainment in this city department. As heretofore, the museum is not opened on Sundays until 1:30 P. M., but on all other days its doors are thrown open to the public at 9 A. M.

The co-operation of the museum with other educational institutions and its assistance to the public and other schools of the city has for the past few years shown a lively growth, details of which will be found in the report of the Director.

Much interest and satisfaction has been shown by the public in the proposed enlargement of the building to enable the establishment of an Historical Museum. As soon as the appropriations for this purpose amount to a sum sufficient to warrant active work the building of this addition will begin.

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During the year the collections have been augmented by the addition of 7,471 specimens above those exchanged or otherwise disposed of.

The inventory on August 31st stood as follows:

Mineralogical and geological specimens	7,923
Paleontological specimens	15,301
Botanical specimens	24,404
Zoölogical specimens	175,961
Archeological specimens	20,607
Ethnological specimens	4,638
Arms, armors, carvings and other objects contained in the Rudolph J. Nunnemacher collection	3,079
Coins, bank notes, medals, etc	2,852
Books, pamphlets, maps, etc	12,730
	267,495

The financial statements of the board for the year are:

Balance in Museum fund Sept. 1, 1905		$11,978.68
Refunded from various sources		6.84
Appropriation to Museum fund Jan. 1, 1906		27,322.11
		$39,307.63
Credited to City Treasurer	$ 5,216.93	
Total expenditures during the year	27,433.89	
		32,650.82
Leaving a balance on Sept. 1, 1906, of		6,656.81
Appropriation to Historical Museum fund Jan. 1, 1906		$38,250.95

No expenditures from this fund.

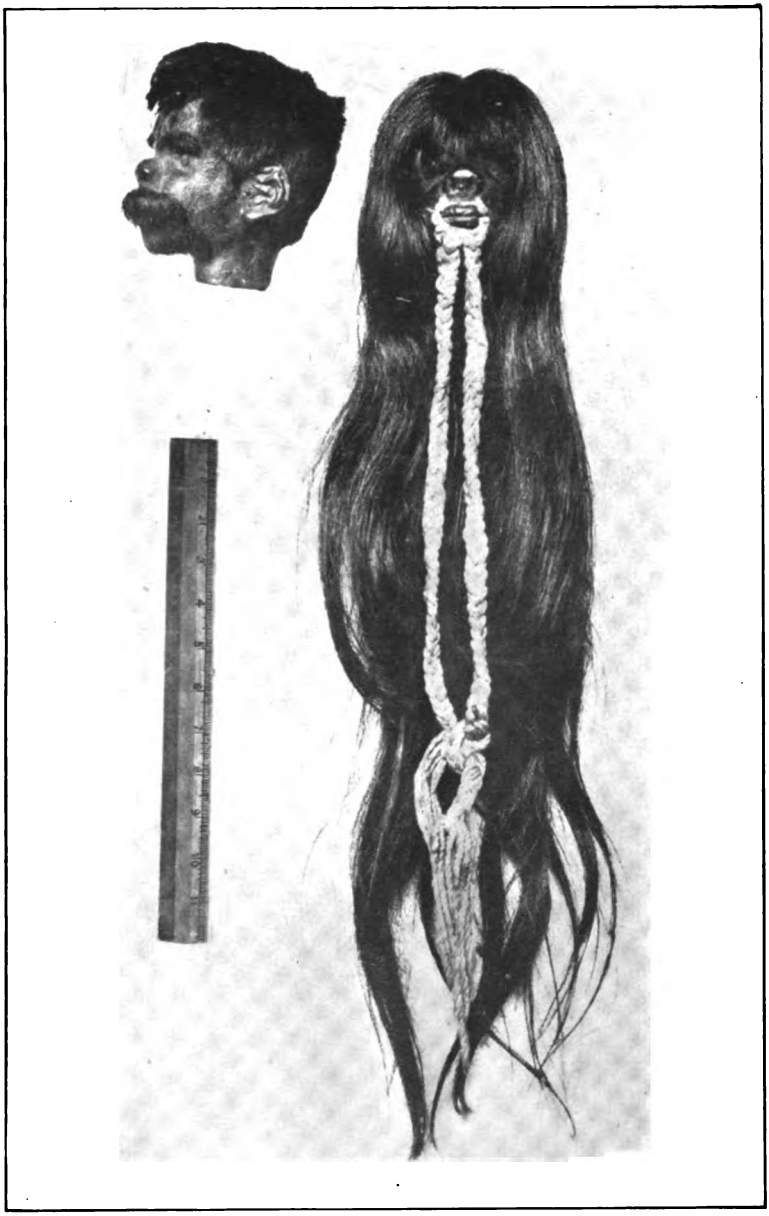
The details of these matters will be found in the Director's report, to which you are respectfully referred.

We wish to express our thanks to those who by donation or otherwise have assisted in adding to the exhibition or working collections, and to the press for its frequent and kindly notices of matters or exhibits of interest to the public.

Respectfully submitted,

E. W. WINDFELDER,
President Board of Trustees.

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SHRUNKEN HUMAN HEADS, PERU.
NUNNEMACHER COLLECTION.

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Report of the Director of the Museum to the Board of Trustees.

Gentlemen—Herewith is presented to you, as prescribed by state law, the twenty-fourth annual report upon the affairs of the museum.

While the year shows a fair amount of progression it falls considerably short of what we would have accomplished had we not been under the necessity of paying for the sins in book-keeping that from 1893-1903 credited us with erroneous amounts which this year had to be charged off from our books, thus making it impossible to set apart certain sums of money that we had intended using for cases and other purposes. The several thousands thus charged off left so little beyond the regular fixed expenses of the museum that it rendered it impossible to execute much work entailing special expense.

The routine duties of the museum have naturally increased and the director has found comparatively little time outside of his general oversight of the institution and his duties as secretary of the board of trustees to devote to the curatorship of the ten departments that at present come entirely under his care. Needless to say none of these have received the attention that they should. We had hoped to have secured assistance in this work during the year, but our financial condition has not allowed of doing so.

Last December it was decided to open the museum on all legal holidays whether national, state or municipal. In practice this has been shown to meet the wants of the public as the greatest numbers of people visiting the museum on any days of the year have been observed on some of these holidays.

Other things equal, the usefulness of a museum may be

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The museum has continued to loan its lecture hall for the meetings of the Wisconsin Natural History Society, the Wisconsin Archeological Society, the Wisconsin Mycological Society and the Milwaukee County Medical Society. During the year the Milwaukee Principals' Association and the Woman's School Alliance have been accorded the same privilege.

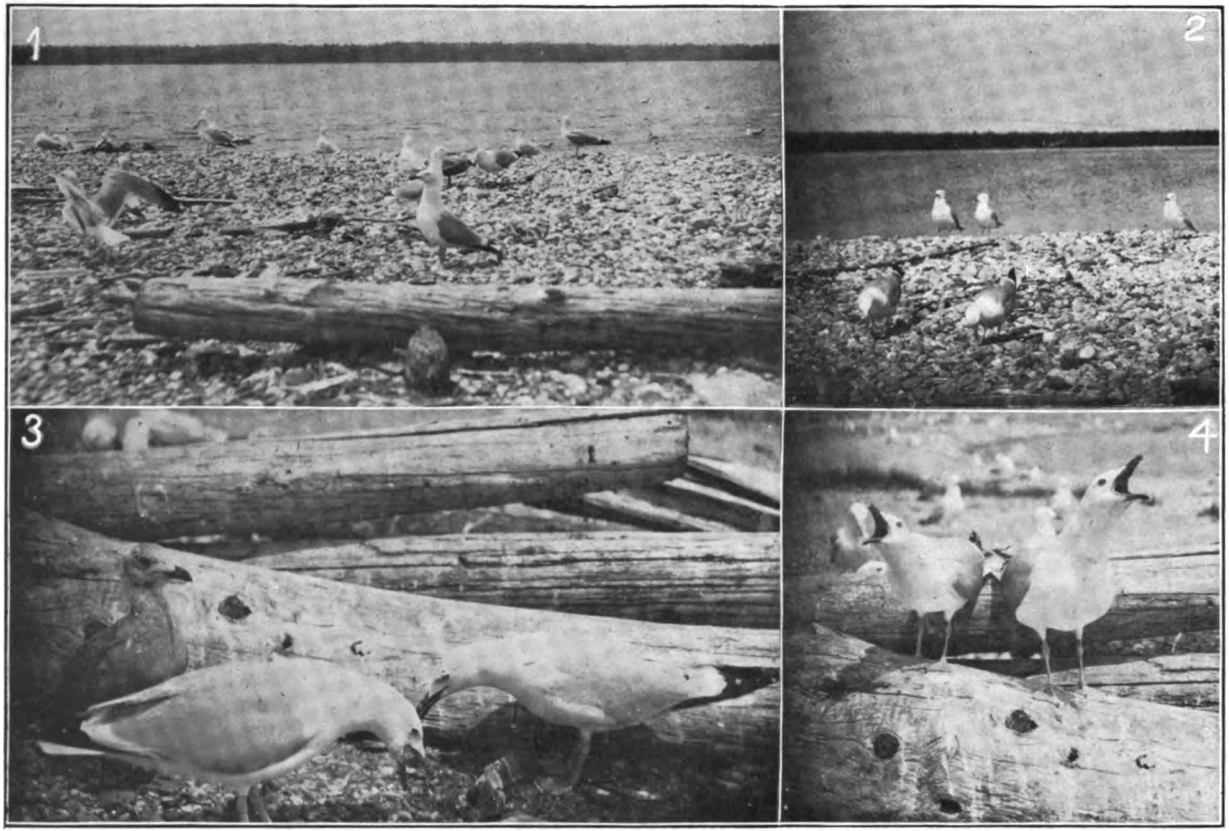
SCHOOL WORK.

Our loans to the schools have taken on a new phase due to the assignment, by the superintendent of schools, of a specified bird and tree to each grammar grade as objects of special study for the entire year. Heretofore nature work of any kind has been discretionary on the part of the teachers and many have not availed themselves of the opportunities offered by the museum while, judging from their borrowings, others have given to their scholars a fairly comprehensive view of bird life. This new departure has resulted in bringing to the museum as borrowers a large number of these backward teachers, but at the same time it has to a considerable degree limited the borrowings of the others to but one or a very few species of birds. It is to be hoped that in the end this specialization will be found to have given results in line with Huxley's dictum that it is better to know a great deal about one thing than a little about many.

The adoption of this list of birds, consisting of Robin, Flicker, Bluebird, Red-headed Woodpecker, Meadow Lark, Cedarbird, Yellow Warbler, Blue Jay and Baltimore Oriole, found us quite unprepared to furnish the large number of duplicates of each species called for and requests had to be placed on file until we secured a sufficient number of skins and our taxidermists had mounted the birds.

During the year 349 loans were made to schools for which 1,011 collections or specimens were used. The proportion of specimens or collections to borrowers has been greatly diminished, but the total has been increased.

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HERRING GULLS ON GRAVEL ISLAND.

1. ADULT FEEDING YOUNG.
2. GULL DANCE.
3. READY TO STEAL FISH REGURGITATED FOR YOUNG.
4. THE CHALLENGE.

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In order to assist those teachers not particularly conversant with ornithology the museum prepared a series of some seventy odd lantern slides, mostly colored, by means of which the director gave an illustrated talk on birds to the public school teachers divided, on account of insufficient seating capacity of the only available room, into nine groups. In this talk we briefly discussed and illustrated matters of phylogeny, evolution of varieties, coloration, structural and habitual adaptations, psychology, and many other of the interesting features of bird life that it was supposed might be overlooked by the unspecialized teacher. The aim of the talk was to suggest points that might be developed by the teachers in their subsequent work before classes. How successful we were in arousing interest we can not judge. The teachers of some of the schools were manifestly interested and asked numerous questions, while those of others at the close of the lecture silently filed out of the room evidently relieved that the ordeal was finished. May the Lord have mercy on the children whose inquisitive minds come under the repressive influence of some of these!

As heretofore Mr. Brues and myself have talked to various classes that have come to the museum for that purpose. Most of these were from the Milwaukee-Downer College, the Normal School, high schools and various parochial schools.

The rearrangement, additions to and furnishing with descriptive labels of the various invertebrate collections seems to have been appreciated by the secondary schools; classes from which, accompanied by their teachers, may frequently be seen making special studies of one or another of these groups. It affords much satisfaction to note the steadily increasing use of the various departments of the museum by those that we specially desire to benefit, and encourages further expenditure of money and labor along these lines; while at the same time it lends an edge to our regret at our present inability to at once work over several collections, particularly the minerals, fossils

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and archeology, which are intrinsically of much value, but which are so arranged as to have little inherent teaching value.

The school lecturer has as heretofore received three classes a day for most of the school year in the room set apart for this purpose, and the museum has furnished specimens for use in illustrating her lectures. The usual attendance of about twenty thousand children a year has been maintained.

ANTHROPOLOGY.

Several important additions have been made to this department in the course of the year; chief among which was the purchase of a collection of some four hundred articles from the Philippines, selected from the duplicate material of the great collection bought by the American Museum at the close of the St. Louis Exposition. This was carefully selected under the direction of Dr. Bumpus in order to give us as complete an exposition as possible of the degree of culture of the inhabitants of these islands; and to it were added a number of important articles selected by myself. Unfortunately, we have no available space in which to exhibit the collection, and it will have to remain stored until we can make room for it. The opportunity of securing a choice from such a large collection is not liable to again offer itself and warrants the securing and storage of the specimens until we are able to handle them. A few specimens have already been put on exhibition.

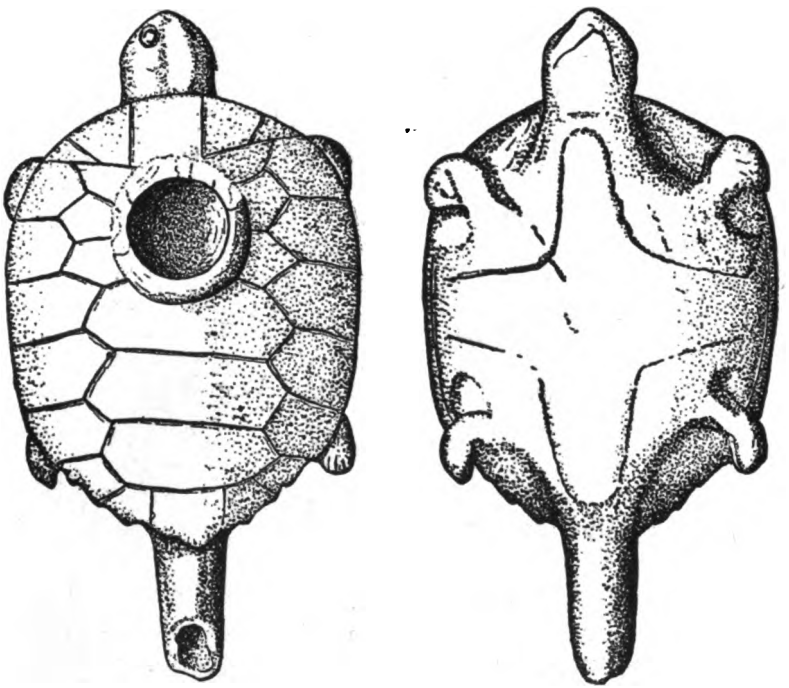
A series of sixty-one artifacts of the Winnebago Indians of this state and ten masks from the Six Nations tribes of New York and Southern Canada were purchased from T. R. Roddy. Such specimens are rapidly becoming more and more difficult to obtain.

Mr. Lorenz Frankfurth gave in the name of his father, the late William Frankfurth, the large collections made by him during his foreign travels. How much of this will be of use to

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us depends entirely on how many of the numerous specimens can be connected with their proper data. They consist largely of fictile and metallic antiquities.

By purchase was obtained a very interesting effigy pipe in the form of a turtle, the second one of this type known to have been found in Wisconsin. Both are owned by the museum.



TURTLE PIPE, BURNETT JUNCTION, WIS.

This pipe was figured and described by me in Vol. 4 of the Bulletin of the Wisconsin Natural History Society, pp. 9-11.

More recently was purchased a remarkably large gorget from Michigan, larger than any of the sort that we recollect having seen in any museum. It will be described and figured in the above mentioned publication.

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NUNNEMACHER COLLECTION.

The fine series of guns has been augmented by the purchase of twenty-seven. Most of these were of old and curious design, while several were of the most modern patterns. Four narrow cases, flanking the two lateral doorways of the corridor in which the collection is exhibited, have been constructed, and the collection has been rearranged to incorporate these additions in their proper places.

A shrunken head of a man with moustache and whiskers has been placed near the other (female?) head from Peru. Among the various heads of this nature that we have seen in different museums we do not recollect another that was unquestionably masculine.

A carved porcelain carp beautifully executed by the artist Kawamoto Eiyan of Japan, has also been added to the collection.

A robbery of twenty-one articles from this collection occurred in October. All but eight of these were recovered and the thief apprehended and sentenced for two years.

MAMMALS.

As intimated, the exhibition of new groups in this and the succeeding department has been curtailed by our inability to construct new cases.

The caribou mentioned in last year's report have been mounted, but as a case for them would entail an expense of about five hundred dollars the specimens are still stored.

A handsome group of Armeria Peccaries from near Perez, Veracruz, has been installed with accessories of a woodland with Vanilla vine made from a specimen given for this purpose by Dr. Trelease of the Missouri Botanical Garden.

An effective little group of three young lions has been installed, as have two groups of mice and a number of single specimens, while quite a number of old specimens have been greatly improved by being taken down and remounted.

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GROUP OF LION CUBS.

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From Ringling Brothers was received as a gift the skin and skeleton of a fine giraffe that died at their winter quarters in Baraboo. The museum is greatly indebted to Mr. J. Van Orden of that city for securing this gift to the museum. The lack of funds for building a case high enough to hold this specimen has delayed its mounting until next year.

One hundred and forty skins and ten skulls of mammals, largely from Wisconsin, were purchased from N. Hollister.

The additions during the year consisted of 231 specimens, of which 154 were by purchase, 6 by collection, and 71 by gift.

BIRDS.

Five groups showing both parents, the young and their nests with their surroundings as they occurred in nature have been made and placed on exhibition. For economy in space as well as money we have made most of these groups as small as possible, thus accommodating a dozen or more in a single case. This series has now grown to such an extent that to a considerable degree they have diverted the attention formerly given to the systematic collection of North American birds. For all purposes except the distinction of species these groups are incomparably better than singly mounted specimens; and for that purpose the local collection usually much better meets the requirements of visitors than does the North American series. Those few who wish for critical examination must in any case have recourse to the skin collection. Were it possible to exhibit all species in groups it would certainly be unadvisable to maintain a series of single birds, and we are forced to consider whether the time is not soon approaching when at least a large part of this collection can profitably give place to other exhibits.

Many specimens and labels have been prepared for an exhibit designed to furnish a considerable amount of information concerning birds, their origin, development, osteology, topography, pterylosis; kinds, structure, coloration, color patterns and forms of feathers; color modifications by age, sex and

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season; the various types of wings, tails, bills and tongues; eggs and nests. The portion of this collection already installed has proved very popular and has undoubtedly greatly increased the bird knowledge of those who have studied it. In many of its features the plan of the collection is believed to be unique.

The series of foreign birds has been rearranged according to a recognized classification and a large number of useless duplicates removed so that three cases have been vacated and given to other exhibits.

A large number of birds were mounted and added to the school loan collections and many have been added to the several exhibition series.

Four hundred and seven birds and seventeen eggs and nests have been received, of which eighty-eight were by purchase, one hundred and one by collection and two hundred and thirty-five by gift.

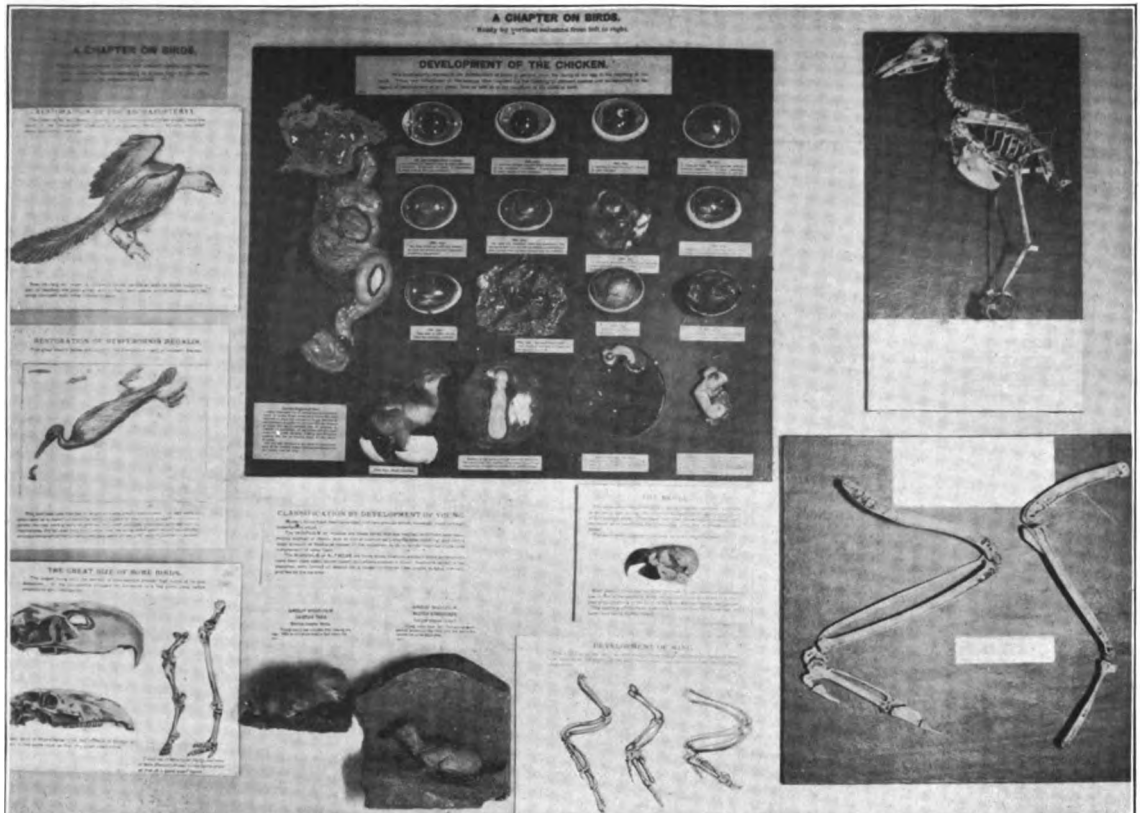
OTHER VERTEBRATES.

As during the last two preceding years, but little attention has been paid to the reptiles, batrachians and fish. We have recognized that the ordinary methods of preparation and exhibition are very unsatisfactory and have not cared to devote much energy to what has been felt must in a few years be relegated to storage rooms as a study collection. We have, however, been seeking information from various sources and experimenting on our own account in order to determine on satisfactory methods. But thirty-one specimens have been added to these departments, three by purchase, two by collection and twenty-six by gift.

INVERTEBRATES AND BOTANY.

The report of the Curator of these departments will be found following mine.

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FIRST SECTION OF EXHIBIT ILLUSTRATING AVIAN MORPHOLOGY.

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PALEONTOLOGY.

The mounted skeleton of a mastodon from Indiana was purchased and placed on exhibition. This important American prototype of the elephant, when found in Wisconsin, so seldom yields more than a few imperfect bones that it seemed hopeless to wait until a skeleton sufficiently complete to mount should be found in this state.

The brain cavity of this specimen being exposed by a break in the skull, at our order a cast of it was taken, and this, together with Mastodon and Elephas teeth are exhibited near the skeleton. The cast of skull and tusks of mastodon formerly on exhibition have been removed.

During the year a series of casts illustrating the phylogeny of the horse by feet and skulls has been mounted on a vertical background so arranged as to emphasize their stratigraphical sequence.

Descriptive labels of many of the large casts upon the tops of the wall cases or hung upon the walls have been prepared and put in place.

One hundred and seventy-one specimens were added to the inventory of which all but four were by donation.

MINERALOGY AND GEOLOGY.

Little has been done in this department during the year, a few specimens have been added to the exhibition series, but most of the accessions have been stored.

At the time of the eruption of Vesuvius two relief maps of the island were ordered. Upon these were painted the recent flow of lava and the fall of ashes. One was placed on exhibition in the museum and the other with specimens of lava, lapilli and ashes temporarily placed in the window of the leading down-town jewelers. For several weeks this map attracted much attention and served to convey an intelligible idea of volcanic conditions in that part of Italy.

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The valuable private collection of the late Moritz von Baumbach was presented in his name by his heirs. This consisted of seven hundred and eight mineral specimens, together with the cabinets in which they were kept. Mr. von Baumbach was a discriminating collector who for many years had studied the subject, and as a consequence his specimens were well selected and properly labeled.

Seven hundred and seventy-seven specimens have been received, seven by purchase, the balance by gift.

NUMISMATICS.

Last year we called attention to the remarkable interest of the public in the display of coins. This attraction became too ardent to be withstood and on the night of January 9th the collection of United States coins was burglarized and four hundred and seventeen gold and silver coins were taken. Of these three hundred and seventy five were the collection presented two years ago by Mr. John H. Tesch, and consisted largely of proof coins whose replacement will be very difficult. The police department was unable to secure any clew to the perpetrator of this crime and none of the specimens have been recovered.

The exhibition of coins is a continuous temptation to those possessing larcenous propensities or even to those who may not be so inclined but are in desperate financial straits. It is questionable whether such an exhibit is not immoral unless so thoroughly and apparently safeguarded as manifestly to place it beyond the reach of ordinary thieves. The building affords no suitable place for such an installation and none could well be made.

There is considerable of history and political geography represented in a good coin collection and to a slight extent this may account for the extraordinary interest that the public still takes in the foreign coins and the remaining exhibit of United

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States coins of lower denominations; but we are inclined to believe that the "struggle for the almighty dollar" is what leads most people to be curious concerning the particular kinds of tokens representing wealth that have at different times and in various parts of the world been the objects of this strife. At all events such a collection will not be properly in place here until the historical museum is established.

HISTORICAL MUSEUM.

The securing of material to properly illustrate the pioneer life of this country is yearly becoming more difficult and it is to be hoped that we soon may be able to actively enter the field and gather up the threads of the past so as to present a systematic exposition of the peoples and things that have tended to make modern civilization what it is. The adoption by the Common Council on September 18, 1905, of a resolution authorizing the establishment of an Historical Museum carried with it an acceptance of the financial obligations embodied in the state law* which gives to this department an income considerably greater than that of the present museum.

The cost of additional land and of building will, however, use up all of this income for some years. The erection of an addition to the building for this purpose will afford great relief to our natural history museum and will facilitate a much needed rearrangement of the sequence of exhibits and of the manner in which they are made.

THE LIBRARY.

The report of the Curator of this department will be found following that of the Curator of Invertebrate Zoology.

BUILDING AND EQUIPMENT.

The ventilation of the museum has at all times been unsatisfactory and has occasioned discomfort to visitors and employes. In searching for a cause I found that in the construction of the

* See appendix.

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building no provision had been made for the ventilation of the engine rooms or the corridor separating them, and that to obtain relief the engineers had for years been in the habit of opening a door into the intake air duct, thus sucking out the heated and more or less oily air from these rooms and immediately distributing it about the building. Also, from an over zealous spirit of economy, much of the used air of other parts of the building was, in cold weather, re-distributed in order to minimize the consumption of heat. Besides this, it was also found that the main intake was so near to the roof of the boiler house as to suck in many of the gases eminating from the ventilators in its roof. An exhaust fan and duct has been provided for the relief of the engine rooms and the intake duct has been extended more than one hundred feet so as to remove it from the contamination of the boiler room. The installation of all this work was done by the employes of that department with but a small amount of outside assistance. It has resulted in a marked improvement in the quality of the air.

Iron screens have been placed on the basement windows and about the base of the elevator shaft so as to render burglarious entrance more difficult.

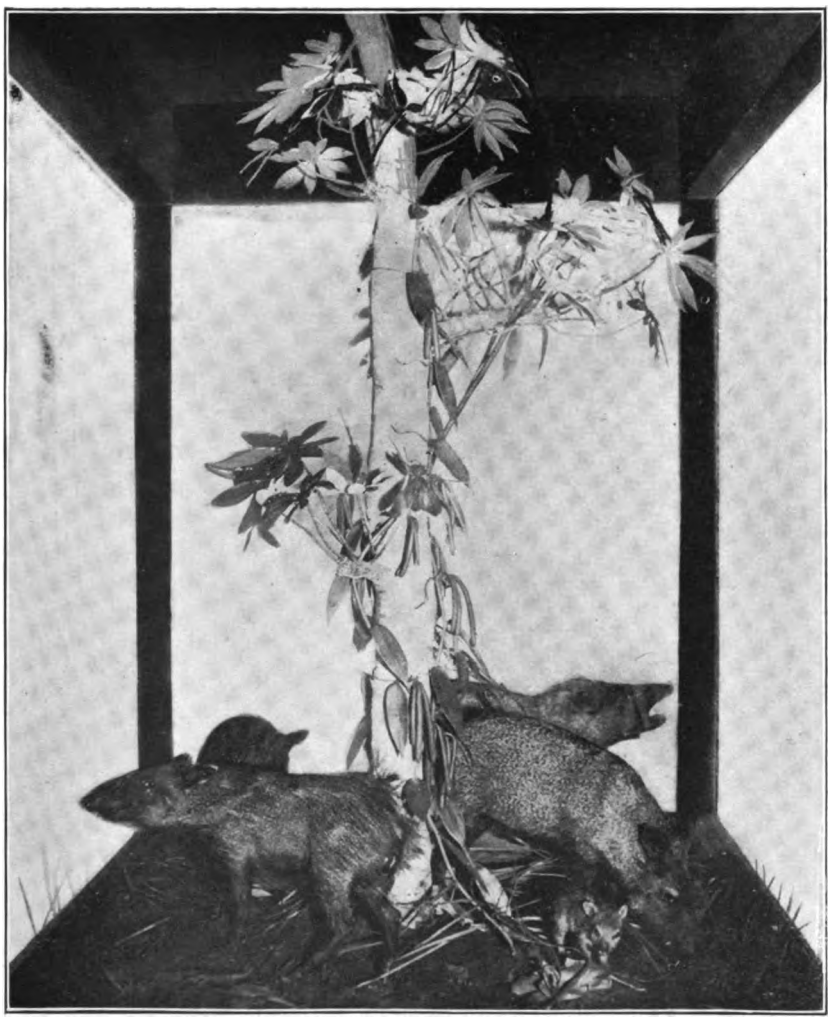
The janitor has repaired and revarnished many of the window sash and inside sills.

A number of cases have been provided with additional special locks.

An apparatus for making large photographic transparencies has been constructed and several other small additions have from time to time been made to the mechanical outfit of the laboratories.

In attempting to bring about a harmonious treatment of the space between the sidewalk and curb in front of both the Library and Museum sides of the building a compromise was effected by which we both agreed to plant shrubbery and the Library agreed to take down the iron fence about its curb. The shrubbery is preferable to a strip of turf, a couple of yards wide, pro-

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GROUP OF PECCARIES.

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tected by an iron picket fence; but we feel that either is out of place in this part of the city and that civic beauty would have better been conserved by widening the sidewalk to the curb. Nothing is harmonious that is out of place.

The Museum service is as efficient as can be expected with the small force of curators. Each one has contributed according to his abilities in the upbuilding and improvement of the collections.

Following the reports of curators will be found the laws governing the historical museum and the lists of accessions divided according to departments.

Respectfully submitted,

HENRY L. WARD,
Director.

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INVENTORY.

7,923	Mineralogical and geological specimens.
15,301	Paleontological specimens.
24,404	Botanical specimens.
1,086	Protozoans, sponges, corals, echinoderms, etc.
99,810	Mollusks.
57,098	Insects (estimate).
312	Crustaceans.
400	Fishes.
1,098	Batrachians and reptiles.
8,306	Birds.
6,240	Birds' eggs and nests.
1,611	Mammals.
20,607	Archeological specimens.
4,638	Ethnological specimens.
3,079	Arms, armors, carvings and other objects of virtu, contained in the Rudolph J. Nunnemacher collection.
2,852	Coins, bank notes, medals, etc.
12,730	Books, pamphlets, maps, etc.
267,495	Total number of specimens.

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FINANCIAL STATEMENT OF THE MUSEUM.

Debit.

Balance in Museum fund Sept. 1, 1905	$11,978.68
Refunded from various sources	6.84
Appropriation to Museum fund Jan. 1, 1906	27,322.11
	$39,307.63

Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:		
Anthropology and ethnology	$1,092.63	
Birds	65.15	
Botany	37.01	
Cleaning supplies	110.08	
Fishes and reptiles	1.53	
Fossils and casts	504.37	
Furniture	1,879.69	
Gas (Museum)	11.04	
Insurance	316.80	
Invertebrates	192.69	
Library	305.62	
Mammals	128.88	
Minerals and rocks	10.00	
Miscellanies	61.18	
Payroll	18,351.40	
Permanent improvements	325.20	
Physical geology	22.00	
Postage and freight	311.93	
Power department (fuel)	1,874.70	
Power department (gas)	19.08	
Power department (insurance)	18.33	
Power department (materials)	402.06	
Power department (permanent improvements).	156.13	
Power department (repairs)	42.83	
Preparation supplies	284.38	
Stationery and printing	179.54	
Telephone	72.00	
Traveling	217.87	
Wages	373.29	
Water	66.48	
Credited to City Treasurer	5,216.93	
		$32,650.82
Balance in Museum fund Sept. 1, 1906		$6,656.81

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FINANCIAL STATEMENT OF THE HISTORICAL MUSEUM.

Appropriation to Hist. Museum fund Jan. 1, 1906	38,250.95
Expenditures	0.00
Balance in Hist. Museum fund Sept. 1, 1906	$38,250.95

FINANCIAL STATEMENT OF THE RUD. J. NUNNEMACHER FUND.

Debit.

Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1905	$907.28
Annual interest paid to City Treasurer, Dec. 14, 1905	125.00
	$1,032.28

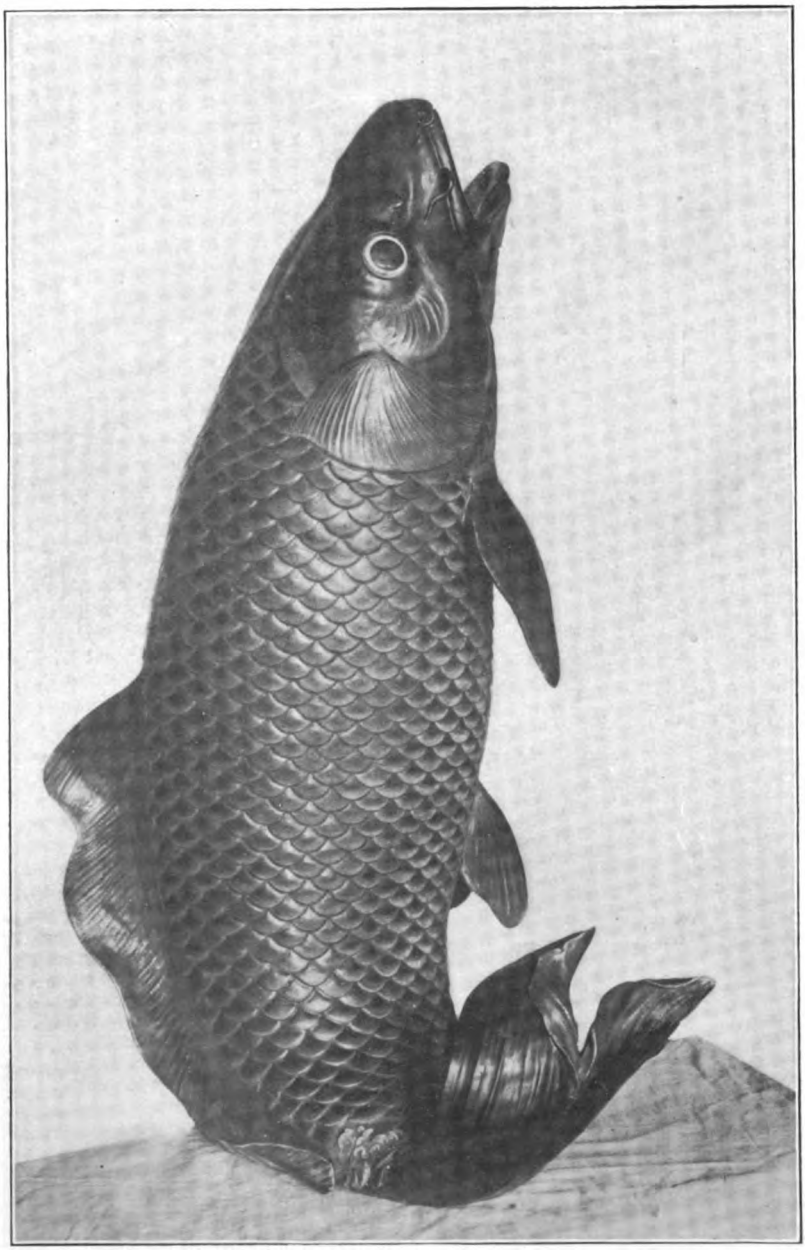
Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:	
For specimens	$800.95
Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1906	$231.33

LIST OF FIRE INSURANCE.

American Insurance Co., of Newark, N. J	$2,000.00
Commercial Union Assurance Co., Limited, of London	2,000.00
Concordia Fire Insurance Co., of Milwaukee	2,000.00
Franklin Fire Insurance Co., of Philadelphia	2,000.00
German Fire Insurance Co., of Pittsburg	2,000.00
Home Insurance Co., of New York	2,000.00
National Union Fire Insurance Co., of Pittsburg	2,000.00
Phenix Insurance Co., of Brooklyn	2,000.00
Royal Insurance Co., of Liverpool	2,000.00
Springfield Fire & Marine Insurance Co., of Springfield, Mass.	2,000.00
Westchester Fire Insurance Co., of New York City	2,000.00
Total	$22,000.00

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CARVED PORCELAIN CARP.
BY KAWAMOTO EIYAN, JAPAN.
NUNNEMACHER COLLECTION.

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Report of the Curator of Invertebrate Zoology.

In accordance with the policy suggested at the close of last year, one of the chief aims of the department of invertebrate zoology has been to enlarge and improve the exhibit collections of some of the lower groups of invertebrates. A great improvement is already apparent among the Sponges and Echinoderms, and it is hoped that similar changes and additions may soon be made to several other previously more or less neglected groups.

A rearrangement of a number of cases on the second floor has made it possible to put the invertebrate exhibits closer together and more nearly in their proper sequence than could be accomplished previously. At present no more satisfactory plan seems feasible.

As before, the botanical collections have been cared for by this department in the absence of any botanist connected with the museum.

The appointment last December of a young man to act as assistant during a part of his time has materially increased the efficiency of the department, especially in the matter of cataloguing, mounting specimens, etc. At present practically all of the exhibit material now on hand is arranged in a fairly satisfactory manner, except that a considerable number of descriptive labels are needed. This will make it possible to give more attention in the future to enlarging the exhibits and to providing new ones of a special nature.

MOLLUSKS.

During the year the general arrangement of the molluskan collection has been only slightly changed, but large numbers of labels have been provided, so that at present every specimen is

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supplied with a printed label giving the name of the species, its habitat, and the provenience of the specimens shown. Descriptive labels for about fifty of the more important groups and families have been prepared and printed. These vary in length from fifty to two hundred words each for the families according to their importance or the special interest attaching to some of their members. They are written as nearly as possible to appeal to the casual visitor rather than to those well versed in natural history.

A series of gastropod shells typical of the more important families have been bisected lengthwise and mounted, to show the internal structure of the shell and manner of growth. These are distributed in the systematic collection.

The largest addition to the collection of mollusks consists of over 900 lots of fresh water shells identified by Professor H. A. Pilsbry. These had been in the possession of the museum for a number of years, but had not been accurately sorted or identified.

Several donations have been received which contain species new to the collections, and numerous duplicates, in all 3,765 specimens.

Mr. G. H. Chadwick has submitted his report on our local shell collection which he worked over while engaged at the museum in 1902. This has been published by the Wisconsin Natural History Society.

The upper sections of the cases containing mollusks have been changed by raising the bottoms to a higher level where the specimens are more easily examined. These spaces are reserved principally for anatomical exhibits and those of a general nature. To these have recently been added a number of liquid preparations, principally Pteropods and Heteropods purchased from the Naples station.

Two large "Tacloba" shells (*Tridacna gigas*), and a shell window made from the shells of *Placuna placenta*, both from the Philippines, have been put on exhibition.

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ARTHROPODS.

During the year 1,244 specimens of insects have been received, principally from collections made by the museum staff or in exchange from correspondents. Two valuable lots of Diptera and one of parasitic Hymenoptera have been received from Dr. Hans Brauns from Cape Colony, and a miscellaneous collection of Indian insects from Mr. E. Brunetti of Calcutta.

The arrangement of the Hymenoptera and Diptera has been improved and the collection now contains many more identified specimens in these two groups. Types of fifteen new species described by the curator have been added.

A number of collections have been identified for other museums or similar institutions. These have come principally from the Hungarian National Museum, The Academy of Natural Sciences of Philadelphia, The Connecticut and Minnesota Agricultural Experiment Stations, and the American Museum of Natural History.

The curator has prepared for publication nine papers, principally descriptive of the collections of insects in the museum or specimens sent to us by other institutions. Seven of these have already appeared in the Bulletin of The Wisconsin Natural History Society and other scientific journals.

The collection of bees obtained by the Museum expedition in 1905 has been very kindly worked up by Dr. S. Graenicher of this city, and a number of Diptera have been sent to the Hungarian National Museum to be identified.

The collections of Coleoptera and Lepidoptera have been to some extent revised, and the cataloguing of the entire insect collection has progressed rapidly. At present, the North American Coleoptera, Orthoptera and Hemiptera are all entered, and the major part of the other orders.

A mounted group of the Milkweed Butterfly during the autumnal swarming of the species has been installed in the hall, and the small exhibit of exotic Lepidoptera rearranged. An adjoining case contains a miscellaneous series showing the

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life-history and habits of a few well-known insects. A small mosquito exhibit and a few other additions have been made to the case containing injurious insects. The synoptical collection has been enlarged and relabeled.

The entire Crustacean exhibit has been remounted on cherry blocks and arranged in systematic order with descriptive labels. It is still very incomplete among the smaller groups, but the larger forms are well represented, including two fine specimens of the Giant Spider Crab (*Kæmpferia kæmpferi*) from Japan.

WORMS, ETC.

The several phyla included under this head are the weakest part of the entire invertebrate exhibit at present. Unfortunately most of these animals are so small that they cannot be well shown in a museum without the aid of models, drawings, etc. These we have not been able to prepare for lack of time.

Until recently they were all together in the upper sections of some of the mollusk cases, but they have been removed to a separate case adjoining the coelenterates, with the hope that this section may be considerably enlarged in the near future.

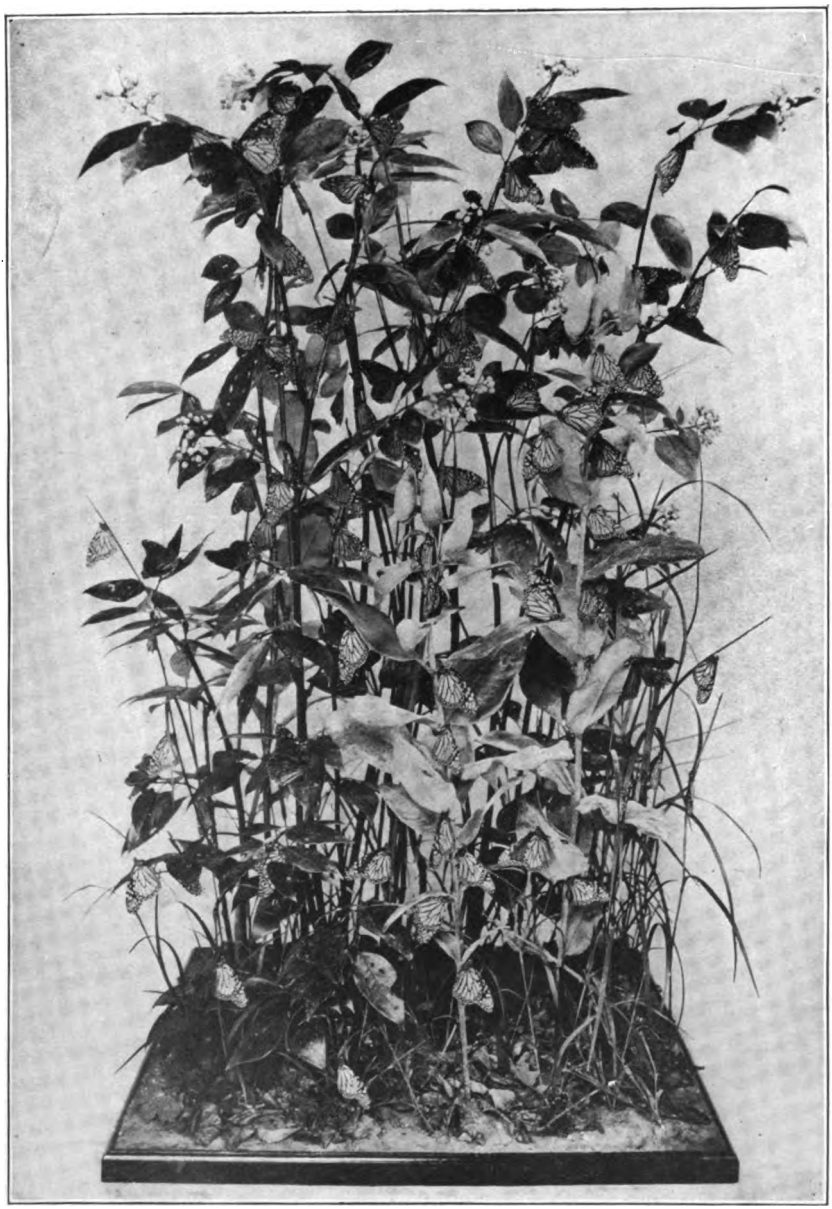
ECHINODERMS.

A collection of 55 species of starfishes and sea-urchins purchased during the year has been added to the exhibit, which has been uniformly mounted on black cards similar to those used for shells, and arranged in systematic order. They occupy three flat cases, the upper sections of which contain liquid preparations.

COELENTERATES.

The entire collection of stony corals has been removed from the two large cases which it occupied and placed in three upright cases. The specimens are exhibited on a black background, supported by individual bracketed shelves of the same

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GROUP REPRESENTING THE FALL SWARMING OF THE MILKWEED BUTTERFLY (ANOSIA PLEXIPPUS).

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color which contrast nicely with the pale tints of the corals. Five large transparencies of scenes along the Great Barrier Reef of Australia are shown in an adjoining case, into which the hydroids and jelly-fishes have been installed.

The sea-fans occupy the following two cases, and have been arranged in the same manner as the stony corals, with a black background.

SPONGES.

Two fine lots of sponges containing over a hundred species have been purchased and together with those previously on exhibition form a very satisfactory series which completely fills two of the large square cases.

PROTOZOA.

Aside from a series of twelve models of Rhizopods nothing has been added to the protozoan exhibit. Unfortunately these animals although very interesting are all too small to be shown except as enlarged models or drawings.

BOTANY.

The remounting of the herbarium of North American plants has been continued throughout the year by Miss Nehrling during her spare time while attending in the hall. About 3,000 sheets have been thus prepared and labeled. All of these have been placed in the systematic arrangement where they are accessible. Another year's work will probably be required to remount the remainder of the sheets now on hand, aside from the current accessions which are being constantly received.

The number of accessions to the botanical collection during the year has not been large, and these consist almost exclusively of specimens collected incidentally by members of the museum staff. A few specimens have been donated by friends of the museum.

The collection of plants made by the museum expedition

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during the summer of 1905 has been identified by Mr. Wm. Finger and Dr. S. Graenicher, who very kindly offered to do the work.

A large piece of rattan vine from the Philippines, one hundred feet in length, has been placed on exhibition, and a few additions have been made to the mushroom collection.

The case containing fresh wild flowers has been kept filled during the entire season. Each common species is exhibited during its period of greatest abundance, and rarities are occasionally introduced. It seems to be well appreciated by visitors

C. T. BRUES,
Curator of Invertebrate Zoology.

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A PORTION OF THE CRUSTACEAN EXHIBIT.

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Report of the Curator of Books.

In submitting my annual report on the museum's reference library it affords me pleasure to state at the outset, that the crowded condition of the books upon the shelves has been greatly alleviated by the timely action of the board of trustees in providing for more shelf room as asked for in the preceding annual report. The new double book stack and the new cabinet containing eight drawers for the reception of atlases, which in the course of the year were added to our library furniture, have greatly facilitated the work and placed us in the situation to conveniently arrange all our books and pamphlets.

Owing to the kindness of Dr. Richard Rathbun, assistant secretary of the Smithsonian Institution, the museum was fortunate in receiving the greater number of volumes of the "Smithsonian Contributions to Knowledge," a publication which was so much desired and which has greatly contributed toward the usefulness of our card catalogue.

We also are under obligations to Dr. Cyrus Adler of the Smithsonian Institution for the interest he has manifested in securing for us a considerable number of volumes of the "Smithsonian Miscellaneous Collections" of which only few parts were represented in our library.

Our library has been the recipient of a number of monographs and a large series of bulletins of the highly valued publications of the Museum of Comparative Zoology at Cambridge, Mass.

The Washington Academy of Sciences has favored us with a complete set of their proceedings and has placed us on their regular exchange list to receive their future publications.

Upon application, Prof. F. J. Washburn, the state entomologist of Minnesota, has with pleasure consented to place our

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library on their regular exchange list and has sent us all their annual reports with the exception of the first and seventh, which are out of print.

A number of other natural history societies and museums agreed to exchange their publications with us for those of the Wisconsin Natural History Society.

Up to the present time no efforts have been made to systematically increase our library by correspondence with other institutions and societies, believing that as far as possible, the analytical work should be attended to first in order to improve the usefulness of the card catalogue. As soon as systematic work is taken up the number of our correspondents will greatly increase and many new books and pamphlets on scientific subjects will be added to our shelves and ultimately to the card catalogue, thereby enhancing its value.

I corresponded with some of the geological and natural history state surveys in relation to the completion of the files of their publications in our library but was only partly successful, as many of their publications were already exhausted and must now be looked for at second-hand book stores.

From the majority of states we have no publications in our library, but in the course of the coming year I hope to be able to secure from them all those that have a bearing on their geology and natural history.

The principal work accomplished during the year was the analyzation of all the publications of the Smithsonian Institution and National Museum, of the U. S. Geological Survey, of all the reports of the explorations and surveys for a railroad route from the Mississippi River to the Pacific Ocean, of the reports of the U. S. geographical survey west of the 100th meridian, of all the publications of the Washington Academy of Sciences and of the Museum of Comparative Zoology at Cambridge, Mass., and of all the publications of a number of state geological and natural history surveys.

There are at present waiting for classification about 3,000

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cards from the Agricultural Department of Washington, but as the space of our card catalogue cabinet is already exhausted, this work will have to be postponed until the present cabinet has been enlarged or an entirely new one been installed by the board of trustees.

Some time ago the museum library received from Mr. Lorenz Frankfurth a large collection of miscellaneous books, formerly in the possession of his father, the late William Frankfurth, in whose name they were donated. Upon examination, however, it was found that only very few of these books were of value to the museum, and consequently nearly all of them were transferred to the Public Library.

In order to devote as much time as possible to the analytical work, which is of great importance, the correspondence with other societies and museums has been limited at present. In connection with this work 4,550 author cards, 7,121 subject cards and 351 guide cards were written and inserted in the card catalogue.

We have received and classified 1,580 new volumes and pamphlets and have placed them on the shelves.

During the year the museum library was often visited by students of natural history and such persons as were interested in mining enterprises; their search for information on the subjects sought for could invariably be satisfied by consulting our card catalogue and by the valuable literature that we were able to present to them from the various state geological and natural history survey reports.

It is much to be regretted that the museum's finances do not allow us to invest a greater part of our appropriation in the purchase of additional reference works, only a very few of such books having been added to the library. We were so much obstructed by this financial stringency that even the binding of our periodicals had to be postponed for some time.

During the year we have expended for new books, periodicals and library card catalogue cards the trifling sum of

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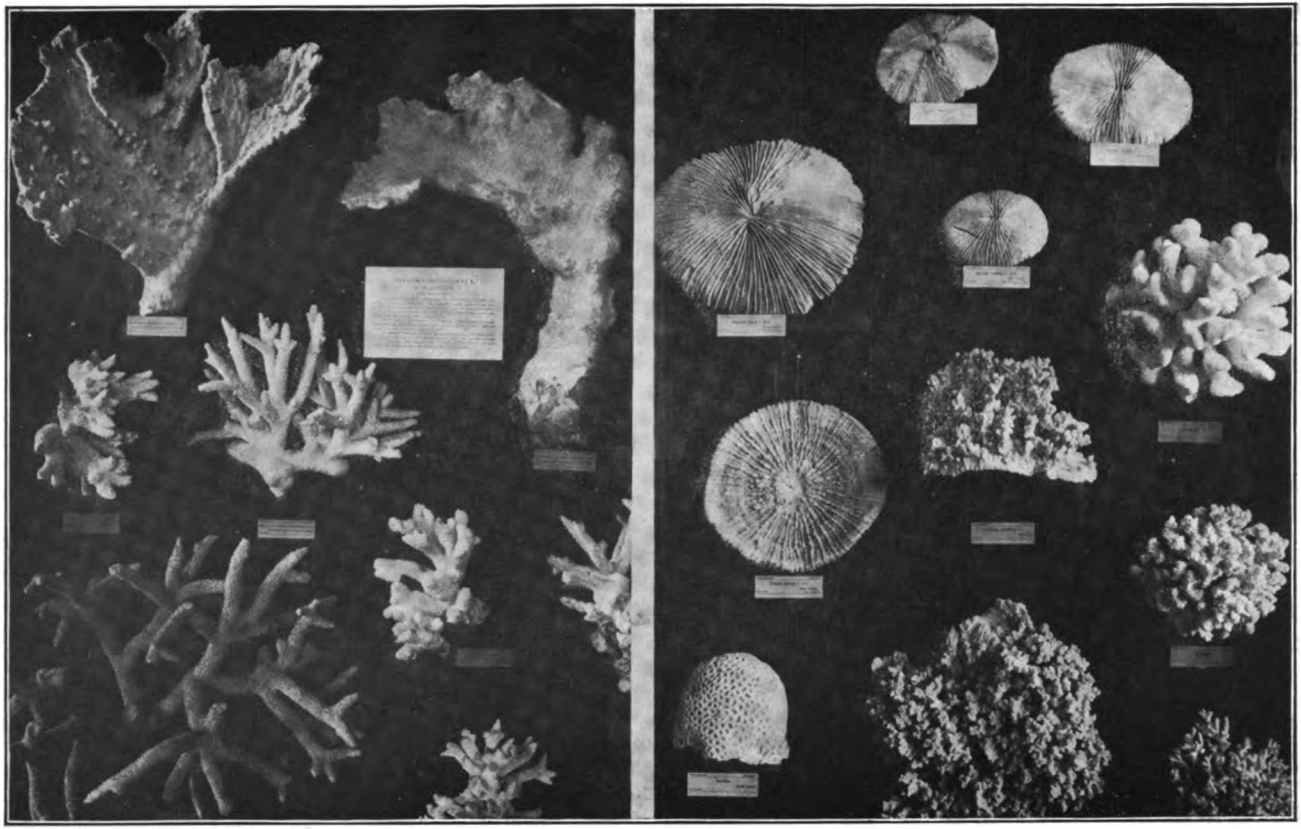
$305.62 and for the library furniture consisting of a new book stack and a cabinet containing drawers for atlases $125.00.

In conclusion, I desire to express my obligations to Miss I. R. Hood, Assistant Librarian of the American Museum of Natural History of New York City, who so willingly and cheerfully has assisted me by devoting part of her time to the interest of our own library, by trying to make it more serviceable to the museum employes and to students and others who come to us for information.

All of which is respectfully submitted.

CARL THAL,
Curator of Books.

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TWO SMALL SECTIONS FROM THE CASES CONTAINING STONY CORALS.

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APPENDIX.

ACCESSIONS TO THE MUSEUM AND ITS LIBRARY.

Donors are citizens of Milwaukee unless otherwise noted, and where no localities to specimens are given, the State of Wisconsin is to be understood.

ZOOLOGY.

Donations.

Andrewcetti, Frank.
- 1 Long-eared Owl.

Arnoldi, Louis.
- 1 Flying Squirrel.
- 1 Long-eared Owl.
- 1 Red Squirrel.

Aron, John.
- 1 White-throated Sparrow.

Aschermann, A. F.
- 2 Finches, Africa.
- 1 Finch, Germany.

Atwood, Carroll.
- 1 Tiger Salamander.

Bacon, E. N.
- 1 Bird's Nest.
- 1 Egg of Cuckoo.

Bartels, Fred.
- 1 Mud Puppy.

Barth, Dr. Geo. P.
- 30 Insects.

Baumbach, Moritz von.
- 2 Corals, Various localities.
- 3 Shells, " "

Beckers, Dr. H.
- 1 Paper Wasp Nest.

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Bertschy, Abert.
1 Nest of Chipping Sparrow.
1 Nest of Robin.
1 Whistling Swan.

Bingenheimer, Walter.
1 Mud Turtle.

Boemer, Richard.
2 Spider Nests.

Bolt, W. C.
1 English Pied Pouter Pigeon.
1 German Cropper Pigeon.

Bolzendahl, Geo.
1 Tiger Salamander.

Bonfoey, Jennie.
1 Black-billed Cuckoo.

Bouta, Edward.
1 Sora.

Bowers, Mrs. Wm.
1 Yellow-billed Cuckoo.

Brandler, Chas.
150 Birds, Various localities.
1 Bott Fly Larvum from rabbit.
1 Star-nosed Mole, Michigan.
1 Virginia Deer.

Brandler, Walter.
1 Black-poll Warbler.
1 Virginia Deer.
1 Warbling Vireo.
1 Yellow-bellied Flycatcher.

Brauer, C.
1 Beetle, Russia.

Brown, Abe.
2 Black Squirrels.
4 Flying Squirrels.
22 Fox Squirrels.
1 Gray Rabbit.
2 Red Squirrels.

Brown, James W.
1 Tiger Salamander.

Brues, Chas. T.
13 Insects, Chicago, Ill.
43 Insects.
3 Microphotographs of insect wings.

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Calmerton, Miss Evalyn.
1 Nighthawk.
Church, A. M., Chicago, Ill.
1 Nest and eggs of Loon.
Clarke, Miss S. Belle.
1 Robin.
Clowes, Herbert.
1 Bat.
97 Insects.
Cockerell, Prof. T. D. A., Boulder, Col.
13 Insects, Florissant, Col.
Cohen, Ben.
1 Oven-bird.
1 Sora.
Cook, Miss Rose A.
1 Sora.
Couse, Miss Edith.
1 Brown Creeper.
Dawe, Miss Ella M.
1 Killdeer.
Delaney, John.
1 White Rat.
Delaney, John, and Mark Flynn.
5 Garter Snakes.
Delaney, John, and Raymond True.
1 Garter Snake.
De Moe, Joseph.
1 Hawk-moth.
Dershka, Frank.
1 Cecropia Moth.
Devlin, Charles.
1 Yellow-bellied Sapsucker.
Dreyfuss, Julius, Hales Corners, Wis.
1 Skull of Belgian hare, abnormal incisors.
Driscoll, George.
1 Sora.
Driscoll, Miss Lizzie.
1 Black and White Warbler.
Elftman, Miss Josephine.
1 Purple Martin.
1 Robin.

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Ellis, Kenneth M.
- 3 Mud Puppies.
- 1 Cockroach, — Sumatra.
- 1 Lot Fairy Shrimp.

Erskine, L. H., Jacksonport, Wis.
- 1 Snowy Owl.

Essmann, Miss Ella.
- 1 Hermit Thrush.

Evenson, Signe.
- 1 Cow-bird.

Fernekes, Val.
- 25 Insects.

Fiebing, J. H.
- 1 Milk Snake.

Fiebrantz, A. M.
- 1 Brunswick Trumpeter Pigeon.

Frankfurth, Wm.
- 474 Mollusks, — Various localities.
- 1 Starfish.
- 3 Corals.

Gardner, Miss Jennie.
- 1 Sora.

Godfrey & Sons Co., E. R.
- 1 Snail, — Nicaragua.

Goldberg, Abe.
- 1 Butterfly.

Goldberg, Louis, and Louis Kuchler.
- 2 Live Frogs.

Gowran, Miss G. E.
- 1 Black-billed Cuckoo.

Groendahl, Miss Louisa.
- 1 Yellow-bellied Sapsucker.

Hackbarth, Freadbart.
- 1 Blarina.

Hackendahl, H. H.
- 2 Bull Frogs.
- 1 Gall.
- 52 Live Frogs.
- 1 Short-eared Owl.
- 1 Tree Toad.

Hackett, E. P.
- 1 Gila Monster, — Arizona.

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Hall, Charles.
1 Yellow-bellied Sapsucker.
Hardenberg, C. B., Madison, Wis.
7 Insects.
Heim, John F.
4 Parakeets.
1 Parrot.
Henderson, Eddie.
1 Painted Tortoise.
Henning, Lawrence.
1 Ruby-throated Hummingbird.
Henning, Peter.
1 Mourning Dove.
Hennings, Miss Hattie.
1 Nest of Ruby-throated Hummingbird.
Hirsch, Herman.
1 Crow.
1 Flying Squirrel.
1 Muskrat.
Holcombe, Miss Alice J.
1 Oven-bird.
Holub, Floyd.
1 Spider.
Hooley, Leigh.
1 Sora.
Horton, S. C.
1 Bobolink.
Ingram, J. G.
1 Alligator.
Jastrow, Arthur T.
1 Short-eared Owl.
Kippenberger, Miss Florence.
1 Luna Moth.
Knopf, Eddie.
1 Garter Snake.
Koch, Walter.
1 Ruby-throated Hummingbird.
Korb, Wm.
1 Morhead Pigeon, Germany.
2 Strasser Pigeons, "
Krupp, Carl.
1 Chipmunk.

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Laue, A. F.
1 Nest of Goldfinch.
1 " " Robin.

Levy, Miss Estelle.
1 Olive-backed Thrush.

Limburger, Erwin.
1 Sora.

Linsmier, Theo., and W. J. Trost.
1 Broad-winged Hawk.

Lohmeier, Otto.
1 Pine Warbler.

Lusk, Miss Grace.
1 Yellow-bellied Sapsucker.

MacManman, Miss.
1 Dragon Fly.

Mansching, Arthur.
1 Mud Puppy.

Mapel, Mrs. J. J.
2 Star Fish, Cushings Island, Me.

Martell, Clarence.
1 Lizard.

McCabe, Miss Kate C.
1 Sora.

McGovern, Dr. P. H.
1 Yellow-bellied Sapsucker.

McHenry, Mrs. Mary.
10 Sea Perch, San Francisco Bay, Cal.
1 Star Fish, Florida.

McMillen, Miss Martha.
1 Promethea Moth.

Melander, A. L., Pullman, Wash.
4 Lots of Insects, Pullman, Wash.
18 Insects.

Millar, Robert.
1 Bittern.

Moeder, Louis.
2 Flying Squirrels.

Mueller, Otto.
1 Cecropia Moth.

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Mueller, Dr. F. (by his widow).

1	California woodpecker's store of acorns in redwood bark,	California.
1	Fox Squirrel, mounted.	
8	Human Foetuses.	
1	Lower Jaw of Bear.	
5	Mollusks,	West Indies.
1	Porcupine, mounted.	
1	Stone bored by Petricola?	West Indies.
1	Tiger Salamander.	

Nash, Guy, Shanagolden, Wis.

1	Northern Pileated Woodpecker.	

New York Aquarium, New York City.

3	Horse-shoe Crabs, alive,	New York.
21	Mollusks, "	" "
17	Sea Anemones, "	" "
1	Stony Coral, "	" "

Obrompalski, Leonard.

1	Paper Wasp Nest and 3 Wasps.	

Ochsner, E. D., Prairie du Sac, Wis.

1	Rattle Snake.	
1	Sora.	

O'Neil, Fred.

1	Oven-bird.	

Osthoff, Herman.

1	African Owl Pigeon.	

Pagel, Miss Emma.

1	Robin.	

Park Commissioners.

1	Roseate Spoonbill,	Texas.
1	Yellow Baboon,	Africa.

Parnkopf, Miss H. M.

1	Promethea Moth.	

Pier, Phillip J.

2	Oven-birds.	

Plankinton, W. W.

2	Nests of Baltimore Oriole.	

Porter, Pierce.

1	Gray Rabbit.	
1	Painted Tortoise.	

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Rehfeld, W. A.
1 Nest of Robin.
1 Olive-backed Thrush.

Riley, Hal.
3 Cowries.

Ringling Bros., Baraboo, Wis.
1 Giraffe, South Africa.

Rohde, Paul C.
1 Frog.
29 Insects.
65 Mollusks.
1 Myrtle Warbler.
1 Red Squirrel.
Sections of Abalone shell.
1 Towhee.

Roundy, J. A., Cushings Island, Me.
11 Birds, mounted, Various localities.
8 Corals, " "
356 Shells, " "

Rowan, David.
1 Brown Creeper.

Ruehl, Herbert.
1 Hermit Thrush.

Ryan, D. F.
1 Yellow-bellied Sapsucker.

Sagebarth, Albert.
1 Promethea Moth.

Schluenz, Dr. R. A., Abrams, Wis.
1 Spider.

Schoenebeck, A. J., Lena, Wis.
1 Duck Hawk.
2 Gray Rabbits, nest and 3 young.
4 Hares, young.
2 Meadow Mice and 4 young.
2 Mice Nests.
3 Purple Finches, young.
2 Quails, young.
6 Ruffed Grouse, young.
1 Shrew.
1 Weasel.
4 White-bellied Mice, young.

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Schoenebeck, Walter, Lena, Wis.
1 Cotton-tail Rabbit.
Schowalter, Miss Emily.
1 Oven-bird.
Schuetz, Lieut. J. B.
4 Beetles and 1 Larva, Philippines.
Sherman, Stephen.
1 Robin.
Shrosbree, Mrs. George.
1 Red Squirrel.
1 Silver-Black Bat.
Shrosbree, George.
1 Hooded Merganser.
Shrosbree, Wm. R., Ravenswood, Ill.
1 Prairie Mole, Ravenswood, Ill.
Simon, Thomas.
1 Dobson Fly.
Skwarski, Walter.
1 Yellow Warbler.
Smith, Miss May.
1 Brown Creeper.
1 Mud Turtle.
Snyder, Miss Z.
1 Horned Toad, alive, Silver City, N. M.
Soule, Alger.
1 Cowrie, Indo-Pacific.
Stavrum, Mrs. E. A.
1 Oven-bird.
Stewart, Miss M. E.
2 Insects, Staten Island, N. Y.
Stittgen, Miss Laura.
2 Red-winged Blackbirds.
Taugher, C. V.
1 Song Sparrow.
Teller, E. E.
1 Short-tailed Shrew.
Thirteenth District School.
1 Goldfinch.
Troy, David F.
2 Caterpillars.
Tufts, Miss Dorothy M.
1 Cecropia Moth.

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Van Altena, Miss Florence.
1 Cecropia Moth and Cocoon.
Van Altena, W. P.
4 Brown Thrashers (young) and nest.
4 Red-headed Woodpeckers (young) and nest.
1 Sora.
1 Virginia Rail.
Wagner Bros., Chicago, Ill.
1 English White Pouter Pigeon, Chicago, Ill.
Ward, Henry L.
12 Crustaceans.
1 Frog.
70 Insects.
4 Leeches.
1 Lot fresh water Sponges.
355 Mollusks.
Ward, Miss Marian.
1 Wilson's Thrush.
Ward, Henry S.
14 Insects.
1 Oven-bird.
Ward's Natural Science Establishment, Rochester, N. Y.
1 Head of Horned Puffin, St. Michaels, Alaska.
Webb, Lindsey.
1 Virginia Rail.
Weckerle, Miss Laurine.
1 Chrysalis.
1 Luna Moth.
Weise, Mrs. M.
1 Tiger Salamander.
Wells, Miss Genevieve.
1 Lizard.
Wendt, John.
1 Wood Thrush.
Wihler, Miss Ella.
1 Dragon Fly.
Wilmane, John.
1 Tiger Salamander.
Winkel, Wm.
1 Cecropia Moth.
Woolcock, C. G.
1 Great Blue Heron.

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Museum Expeditions.

95 Birds.
10 Crustaceans.
6 Eggs of Herring Gull.
6 Mammals.
491 Insects.
242 Mollusks.

Acquired by Exchange.

1 Bird.
199 Insects.
115 Mollusks.

Acquired by Purchase.

88 Birds.
10 Brachiopods.
2 Gray Rabbits.
2 Harbor Seals.
140 Mammal Skins and 10 Skulls.
27 Mollusks.
207 Protozoans, Porifera and Radiates.
3 Rattle Snakes.

BOTANY.

Donations.

Brenkle, Dr. J. F., Kulm, N. D.
8 Mosses and Lichens.
Brown, Abe.
3 Mushrooms.
Clowes, Herbert.
Leaves of Japanese Maple, Japan.
9 Plants.
Gebhardt, Miss Anna.
1 Everlasting Plant,
Hackendahl, H. H.
1 Gall.
Halsey, P. L.
5 Mushrooms.
Missouri Botanical Garden, St. Louis, Mo.
1 Photo of Vanilla planifolia fruit.
1 Vanilla vine.

Digitized by Google

Mitchell, Prof. I. N.
3 Plants showing methods of seed dispersal, Stony Lake, Mich.
13 Packets of Lichens, " " "
Roundy, J. A., Cushings Island, Me.
2 Leguminous seed pods. (?)
Somers, J. J.
1 Mushroom.
Stetzel, Edwin.
1 Mushroom.
Ward, H. L.
54 Pressed plants.

Museum Expeditions.

170 Botanical specimens.

Acquired by Purchase.

1 Calamus, nearly 100 feet long, Philippines.

PALEONTOLOGY.

Donations.

Altman, H. E.
1 Baculites compressus, Lavina, Mont.
Cockerell, Prof. T. D. A., Boulder, Col.
4 Fossil leaves, Florissant, Colo.
Frankfurth, Wm.
4 Fossils.
Meyer, Rev. F. W. C.
31 Brachiopods, Cincinnati, O.
11 Bryozoans, " "
Mueller, Dr. F. (by his widow).
6 Fossil Cephalopods.
1 " Coral.
Stewart, Miss M. E.
38 Fossils, Various localities.

Acquired by Exchange.

3 Fossils.

Acquired by Purchase.

1 Mastodon, mounted skeleton, Indiana.
1 " cast of brain cavity, "

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MINERALOGY AND GEOLOGY.

Donations.

Baumbach, Moritz von.
708 Minerals, Various localities.

Chase, Geo. H.
1 Lignite, Kenmare, N. D.

Elkey, W. H.
2 Natural weatherings simulating Indian axe and Indian spear.

Ernst, John A.
3 Carborundum, Niagara Falls, N. Y.

Frankfurth, William.
87 Minerals, Various localities.

Hodgins, Rev. J. C.
1 Magnetite with arsenical pyrite, Algoma, Ont.

Laur, Mrs. P.
1 Drusy Quartz, Rushford, Minn.

Lohndorf, E.
1 Lead pipe, altered by electrolysis.

Mann, Chas. L.
2 Chrysotile, Marquette Co., Mich.

Mapel, Mrs. J. J.
1 Garnet in rock, Cushings Island, Me.

Mueller, Dr. F. (by his widow).
12 Minerals, Various localities.

Murphy, John P.
1 Calcite, Escanaba, Mich.

Myers, Miss Mary.
32 Minerals, Various localities.

Porter, Miss Mildred.
1 Salt Stalactite from evaporating vats, Manistee, Mich.

Pringle, T. J.
1 Chalcopyrite, Alta, Utah.

Rawls, Wm. C.
1 Gypsum, sawed block. Hot Springs, S. D.

Roundy, J. A., Cushings Island, Me.
2 Polished marble urns.

Schubert, Walter.
1 Chalcopyrite.
1 Pyrite.

Digitized by Google

Schwind, Emil.
19 Marcasite concretions.
5 Pieces of Marble.
Stewart, Miss M. E.
20 Minerals, Various localities.
Wilson, Clare F.
1 Asbestos.

Acquired by Purchase.

3 Copper specimens.
1 Molybdenite, Birch Creek, Mont.
1 Relief Map of Vesuvius, plain.
1 " " " " sectioned.
1 Uraninite, Joachimsthal, Bohemia.

ARCHEOLOGY.

Donations.

Frankfurth, Wm.
1 Lot specimens, Various localities.
Juehlke, Walter.
3 Arrow Heads.
Mueller, Dr. F. (by his widow).
4 Grooved Stone Axes.
Riley, Hal.
1 Flint Arrow.
1 " Spear.
Stewart, Miss M. E.
1 Stone Axe, Frisco, N. M.

Acquired by Exchange.

2 Arrows, colorless quartz.
1 Flint Spear.
1 Hematite Cone.
1 Indian Pipe.
1 " Turquoise pendant.
1 Limestone Pipe.

Acquired by Purchase.

1 Celt, Michigan.
81 Cliff Dwellers pots, Utah and Colorado.
1 Gorget, Michigan.
1 Indian Pipe, Tippecanoe Co., Ind.
1 Set fire sticks, Port Darwin, Australia.
1 Turtle Pipe.

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ETHNOLOGY.

Donations.

Elkey, W. H.
- 1 Brick and 4 Keys from proposed territorial state house, — Cassville, Wis.

Figge, Geo.
- 2 Sioux War Bonnets, — Rushville, Neb.

Hamilton, Major Wm. R., Ft. Moultree, S. C.
- 2 Pieces 6 inch shell, — U. S.
- 1 Rotating band 5 inch shell, — "
- 1 Saddle and Bridle, used by Gen. Chas. S. Hamilton. — "

Hoffmann, C. F.
- 1 Bracelet for holding yarn about wrist for crocheting, 1680-90, — Germany.

Members of Excelsior Hook & Ladder Co., No. 1, Milwaukee.
- 1 Bell.

Milwaukee Public Library.
- 2 Appointments as Register of Land Office, Milwaukee, of Geo. H. Walker, 1845 and 1846, by Jas. K. Polk, — Washington, D. C.
- 1 "Gazette of the U. S.," 1790, — New York.
- 1 "The New York Packet," 1789, — " "

Mueller, Dr. F. (by his widow).
- 1 Birch bark Canoe.
- 2 " " Baskets.
- 2½ Pair snowshoes.
- 1 Sled.

Rindskopf, Elias.
- 2 Milwaukee newspapers, 1853 and 1859.

Roundy, J. A., Cushings Island, Me.
- 2 Indian Baskets, — Alaska?
- 1 Musical Instrument, — Madrid.

Windfelder, E. W.
- 1 Boston Gazette & County Journal, 1770, — Boston, Mass.

Zwerner, Miss Nellie.
- 1 Binding Shoe, — China.

Acquired by Exchange.

- 2 Indian Bags, — West Coast.
- 1 Pair Moccasins, — "
- 2 Pipes, — "
- 2 Trout Hooks, — "

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Acquired by Purchase.

61	Ethnological specimens of Winnebago Indians,	Wis.
400	" "	Philippines.
1	Hat,	Congo Region, Africa.
38	Native Artifacts,	Borneo.
2	Navajo Blankets,	Utah.
1	" Bridle,	"
4	" Necklaces,	"
1	" Squaw Belt,	"
1	Piece of fringed cloth,	Congo Region, Africa.
10	Six Nation Masks,	N. Y. and Canada.

NUMISMATICS.

Bierman, C. F.

1	Five Bani, 1901,	Roumania.
11	One Cent,	U. S.
1	Three Pfennige, 1826,	Austria.

Brickner, Wm. B.

1	Half Penny, 1861,	Great Britain.
1	One Cent, 1897,	U. S.
1	" " 1905,	"

Dracos, Peter.

1	Five Aenta,	Arcadia, Greece.

Frankfurth, Wm.

1	Medal, Golden Wedding of Kaiser Wilhelm and Kaiserin Augusta,	Germany.

Hirvonen, Weikkr.

1	One Markka,	Finland.

Horwitz, Sam.

1	Fifteen Kopeck, silver, 1905,	Russia.
1	Five Cents, silver, 1891,	Canada.

Malouf, Edward.

1	One Cent, 1858,	U. S.
1	Three Cents, 1865,	"
1	" " 1868,	"
1	Twenty Cents, 1875,	"
1	Two Cents, 1858,	"

Mead, Fergus.

1	One Penny, 1904,	Jamaica.
1	Coin,	Rome.

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Numismatic & Antiquarian Society of Montreal, Can.

1 Bronze Medal, Chateau de Ramezay Bicentennary, 1906, Montreal.

Oiestod, G. A.

1 Five Ore, 1876, Sweden.
1 One " 1899, Norway.
1 Ten " 1892, "
1 " " 1903, Sweden.

Peitz, Peter.

1 One Centisimo, copper, 1904, Italy.

Stearns, Jacob.

1 Ten cent scrip, Bishop's General Storehouse, 1898, Salt Lake City, Utah.

Stirn, August.

1 One-quarter dollar, gold, California, 1870, U. S.
1 Dollar, gold, 1853, "
1 One Lafayette dollar, 1900, "
1 Twenty-five cent bill, 1870, Canada.

Struck, Walter.

1 One cent, 1847, U. S.

Tibbitts, A. E.

1 Six Pence, 1856, Great Britain.

Ward, Henry L.

1 Five Cent nickel, 1905, U. S.
1 " " " 1906, "
1 " " silver, 1839, "
3 Three Cents, nickel, 1866, 1868, 1881, "
4 Two " copper, 1864, 1865, 1866, 1868, "

Acquired by Purchase.

12 Coins, U. S.
1 One Centavo, nickel, 1883, Mexico.

NUNNEMACHER COLLECTION.

Donation.

Colnik, Cyril.

1 Kilt of Chain Armor, Germany.

Acquired by Purchase.

1 Carved Carp by Kawamoto Eiyan, Japan.
1 Gold Ring, about 21 K., native make, Africa.
27 Guns, Various localities.
1 Shrunken head of man, Peru.

Acquired by Exchange.

2 Swords, Turkey and U. S.

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LIBRARY.

By Donation and Exchange.

Alabama—Geological Survey of Alabama, University.
Revised Map of the Southern Part of the Cahaba Coal Fields.

California—California Academy of Sciences, San Francisco.
In Memory of President Dr. Harvey Willson Harkness.
In Remembrance of President William Alvord.
University of California, Berkeley.
American Archaeology and Ethnology, Vol. 4.
Preliminary Report of the State Earthquake Investigation Commission.
Publications, Zoology, Vol. 3.
Putnam, The Dep't of Anthropology of the U. of Cal.

Colorado—Colorado College, Colorado Springs.
Semi-Annual Bulletin of the Colorado College Observatory.
University of Colorado, Boulder.
Studies, Vol. 1 No. 4; Vol. 3.

Connecticut—Connecticut Historical Society, Hartford.
Annual Report 1906.
State Geological & Natural History Survey, Hartford.
Bulletins, Nos. 2-5.
First Biennial Report.

Florida—Agricultural Experiment Station, Lake City.
Bulletins, 79, 81-85.

Illinois—Augustana College & Theological Seminary, Rock Island.
Augustana Library Publications, No. 5.
Field Museum of Natural History, Chicago.
Botanical Series, Vol. 2 No. 3.
Zoological " Vols. 6-7.
John Crerar Library, Chicago.
Eleventh Report, 1905.
Supplement to the List of Serials in Public Libraries of Chicago and Evanston, 1905.
University of Chicago, Chicago.
Barker, Description of Brain and Spinal Cord in Hereditary Ataxia.
Bensley, The Structure of the Glands of Brunner.
Davenport, The Animal Ecology of the Cold Spring Sand Spit.

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Donaldson, Weight of the Central Nervous System of the Frog.
Eycleshymer, The Early Development of Lepidosteus Osseus.
Greeley, Artificial Production of Spores in Monas.
Hatai, The Finer Structure of the Neurones in the Nervous System of the White Rat.
Jordan, The Self-Purification of Streams.
Koch, The Lecithans.
Loeb, The Production of Muscular Twitchings.
Shambaugh, Blood-Vessels in the Labyrinth of the Ear.
Tower, Colors and Color Patterns of Coleoptera.
Webster, Absorption of Liquids by Animal Tissues.
Wells, Studies in Fat Necrosis.

Indiana—Dep't of Geology and Natural Resources, Indianapolis.
30th Annual Report.

Iowa—Iowa Geological Survey, Des Moines.
Annual Report, Vol. 15.

Kansas—Kansas Academy of Sciences, Topeka.
Transactions, Vol. 20.
University of Kansas, Lawrence.
Science Bulletin, Vol. 3 Nos. 1-6.

Maine—Portland Society of Natural History, Portland.
Proceedings, Vol. 1; Vol 2 part 6.

Maryland—Johns Hopkins University, Baltimore.
Circulars, Vol. 25.
Maryland Geological Survey, Baltimore.
Maryland Geological Survey, Vol. 5.

Massachusetts—Boston Society of Natural History, Boston.
Proceedings, Vol. 33.
Essex Institute, Salem.
Annual Report, 1906.
Sears, Geology of Essex County, Mass.
Museum of Comparative Zoology, Cambridge.
Bulletins, Vols. 8, 22, 30-49.
Cabot, The Immature State of the Odonata.
Lyman, Supplement to the Ophiuridae and Astrophytidae, No. 6.
Memoirs, Vols. 6 No. 2; 8 No. 1; 9 No. 1; 11 No. 1; 23 No. 2; 26 No. 1; 27 No. 2.

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Museum of Fine Arts, Boston.
Bulletins, Vol. 4.
Thirteenth Annual Report.

Museum of Natural History, Springfield.
Report, 1905.

Tufts College, Tufts College.
Studies, Vol. 2.

Michigan—Detroit Museum of Art, Detroit.
Exhibition of Arctic and Antarctic Paintings by Frank Wilbert Stokes.
Exhibition of Paintings by the Society of Odd Brushes.
First Annual Exhibition of Paintings by American Artists, 1906.

Geological Survey of Michigan, Lansing.
Annual Report, 1904.

Michigan Academy of Sciences, Lansing.
Seventh Report.

University of Michigan, Ann Arbor.
Adams, An Ecological Survey in Northern Michigan.
Bulletin, Vol. 7 No. 3.
Calendar, 1905-6.

Minnesota—Geological & Natural History Survey, Minneapolis.
Freeman, Minnesota Plant Diseases.
MacMillan, Minnesota Plant Life.
" The Higher Seed-Plants of the Minnesota Valley.
Minnesota Botanical Studies, Vol. 1 parts 2-12; Vols. 2-3.
Zoological Series, 2-4.

University of Minnesota, Minneapolis.
Annual Report of the Agricultural Experiment Station, 2-6, 8-10, 12.

Mississippi—Agricultural Experiment Station, Agricultural College.
Logan & Perkins, The Underground Water of Miss., Bulletin 89.

Missouri—Academy of Science, St. Louis.
Transactions, Vol. 16.

Educational Museum, St. Louis Public Schools, St. Louis.
Catalogue of Collections for Circulation, 1906.

St. Louis Public Museum, St. Louis.
Bulletin 1, 1905.

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Montana—University of Montana, Missoula.
Bulletins, Nos. 28-31.

New Mexico—University of New Mexico, Albuquerque.
Bulletins, 1-3.

New Jersey—Vineland Historical & Antiquarian Society, Vineland.
Annual Report, 1905.

New York—American Museum of Natural History, New York.
Annual Report, 1905.
Bandelier, Aboriginal Myths and Traditions Concerning the Island of Titicaca, Bolivia.
Bulletin, Vol. 21.
Journal, Vol. 6.
Memoirs, Vol. 9.
Proceedings of the International Congress of Americanists. 13th Session, 1902.

Brooklyn Institute of Arts & Sciences, Brooklyn.
Cold Spring Harbor Monographs 6.
Museums of —. Report for the year 1905.
Science Bulletin, Vol. 1 Nos. 6-8.

Buffalo Society of Natural Sciences, Buffalo.
Charter and By-Laws, 1905.

Metropolitan Museum of Art, New York.
Catalogue of the Crosby Brown Collection of Musical Instruments of All Nations. 1. Europe; 2. Asia; 4. Historical Groups.
Catalogue of the Crosby Brown Collection of Musicians' Portraits. 4. Biographical Sketches.
Catalogue of Keyboard Musical Instruments in the Crosby Brown Collection, 1903.
Dean, Catalogue of European Arms and Armor.

New York Botanical Garden, New York.
Bulletin, Vol. 5.

New York State Museum, Albany.
Annual Report, 57th.
Bulletins, 84, 93, 95, 96, 97, 99, 100, 102.

Rochester Academy of Science, Rochester.
Proceedings, Vol. 3 Brochure 3; Vol. 4 pages 203-231.

Staten Island Ass'n of Arts & Sciences, New Brighton.
History, Act of Incorporation, etc., 1906.
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Syracuse University, Syracuse.
Contributions from the Zoological Laboratory, Vols. 1-2.

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North Carolina—Elisha Mitchell Scientific Society, Chapel Hill.
Journal, Vol. 22.

State Audubon Society, Greensboro.
Annual Reports, 2-4.
Pearson, Protect the Insect-Eating Birds.

Ohio—Cincinnati Museums Association, Cincinnati.
Thirteenth Annual Exhibition of American Art.
Twenty-Fifth Annual Report.

Denison University, Granville.
Bulletin of the Scientific Laboratories, Vol. 13.

Geological Survey of Ohio, Columbus.
Bulletins, No. 2; Nos. 7-8 (Fourth Series).

Historical & Philosophical Society of Ohio, Cincinnati.
Annual Report, 1905.

Lloyd, C. G., Cincinnati.
Lloyd, The Tylostomeae.

Ohio Archæological & Historical Society, Columbus.
Quarterly, Vol. 15.

Ohio Department of Agriculture, Columbus.
Bulletin, No. 6.

Ohio State University, Columbus.
The Ohio Naturalist, Vol. 6.

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The Wilson Bulletin, Vol. 13.

Pennsylvania—Academy of Natural Sciences, Philadelphia.
Proceedings, Vol. 58.

Carnegie Museum, Pittsburgh.
Annual Report, 1905.

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Reports for 1903-4; 1904-5.

Maccurdy, George Grant, Lancaster.
Maccurdy, The Eolithic Problem, Evidences of a Rude Industry Antedating the Paleolithic.

Pennsylvania Museum, Philadelphia.
29th Annual Report Pennsylvania Museum and School of Industrial Art.
Bulletin, 1906.

University of Pennsylvania, Philadelphia.
Catalogue, 1905-6.
Conklin, The Organization and Cell-Lineage of the Ascidian Egg.

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Proceedings of Commencement, June 1906.
" " "University Day," Feb. 22, 1906.
Provost's Report, 1905.
Publications, 6th Series: No. 1 part 1.

Viereck, Henry L., Philadelphia.

Viereck, Additions to Sphegoidea (Hymenoptera).
" Classification of Bees of the Genus Bombomelecta.
" Hymenoptera of Beulah, New Mexico.
" New Species of the Subfamily Pseninæ.
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" The Species of Odontophotopsis (Hymenoptera).

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34th Annual Report.

Texas—University of Texas, Austin.

Bulletin, Scientific Series, Nos. 5-7.

Washington, D. C.—Carnegie Institution.

Davenport, Inheritance in Poultry.
Castle & Forbes, Heredity of Hair-lengths in Guinea-pigs, etc.

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Proceedings, Vol. 8.

National Academy of Sciences.

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Smithsonian Institution.

Annual Report, 1904.
Bulletins, 54-55.
Contributions to Knowledge, Vols. 2-22, 29-34.
" from the U. S. National Herbarium, Vol 8 part 4; Vol. 9 part 1.
Langley, Experiments in Aerodynamics.
" The Internal Work of the Wind.
Rathbun, Fisheries of the U. S.
Smithsonian Miscellaneous Collections, Vols. 13, 16-19, 21-27, 42-44 and 13 separates.

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Annual Report, 23rd.
Bulletins, 28, 29, 32.

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U. S. Department of Agriculture.

Bureau of Animal Industry, Bulletins, 54, 64, 67, 76, 80, 85, 91, 93.

" " Biological Survey, Bulletins, 21-25, 51, 52. North American Fauna, No. 25.

" " Chemistry, Circular No. 10, revised.

" " Entomology, Bulletins, Nos. 54-57, 64, 68-74.

" " " Circulars, Nos. 65-66; second series Nos. 3, 15.

" " Plant Industry, Bulletins, 85, 88-90, 93.

" " Soils, Bulletins, 10, 30.

" " Technical Series, No. 10, 11, 12 part 1.

Division of Agrostology, Bulletins, 1, 2 revised, 6, 9, 10, 12, 13, 14 revised, 15, 19 revised, 20.

" " Forestry, Bulletins, 15, 36, 41-44, 49, 50, 55.

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Howard, Bibliography of the more important Contributions to American Economic Entomology.

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Yearbook, 1905.

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U. S. Department of the Interior.

12th Census of the U. S. 1900, Statistical Atlas.

" " " " " Abstract.

U. S. Geological Survey.

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STATE LAWS CONCERNING THE HISTORICAL MUSEUM.

No. 457, A.] [Published March 29, 1897.

CHAPTER 111.

AN ACT to provide for the establishment and maintenance of historical museums in cities of the first and second class, and to authorize the levy of a tax to purchase, erect and maintain such museums.

The people of the State of Wisconsin, represented in senate and assembly, do enact as follows:

Section 1. Any city of the first and second class is hereby authorized to establish and maintain a free public historical museum, for the receipt and free public exhibition of works and objects of historical interest, with reference or pertaining to the state and nation and the late civil war between the states of the United States, and for that purpose to receive, hold and manage any donation, devise or bequest, or any loan of articles that may be made to such city for the increase or maintenance of such historical museum, under the regulations and conditions as hereinafter contained, or such as may be agreed upon between the donors and such city, or as may be adopted as provided by this act.

Section 2. The museums established and maintained under this act shall be under the general management, control and supervision of a board of nine trustees, and shall be styled "board of trustees of the historical museum of the city of ————." The first board of trustees shall consist of the mayor of such city, the president, or other presiding officer of the school board of such city, and three members of the common council, or other governing body of such city, to be

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designated by said mayor, and of four resident tax-payers of such city, who shall, likewise, be chosen by the mayor. The mayor and president of the school board shall always be ex-officio members of said board of trustees. The said aldermen, or members of the council or other governing body of such city, to be appointed, shall hold office as members of said board during the time that they shall continue to hold their then terms as aldermen or members of the governing body of such city, and the said resident tax-payers shall be divided into four classes; the first one to be appointed to hold office for one year, the second to be appointed for two years, the third to be appointed for three years, and the fourth to be appointed for four years after their respective appointments, and all vacancies to be filled on the nomination of the mayor. Whenever the common council or other governing body of any city, falling within the class designated by this act, shall pass a resolution to provide in effect that a board of trustees be named, and for the establishment of a historical museum, as contemplated by this act, it shall thereupon become the duty of the mayor of such city, to make the appointments as herein provided, and to call a meeting of the said board. None of the said trustees shall receive any compensation from the city treasury, or otherwise, for their services as such trustees; and no member of said board of trustees shall become, or cause himself to become interested, directly or indirectly, in any contract or job for the purchase of any matter pertaining to the museum, or for fuel, furniture, stationery or other things necessary for the increase or maintenance of said museum. Such trustees shall take an official oath to faithfully discharge their duties as such, and shall be subject to all the restrictions, disabilities, liabilities, punishments and limitations prescribed by law as to the aldermen, or other governing body of such city.

Section 3. At the first meeting of said board of trustees, the said board shall organize by the choice of one of its mem-

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bers to serve as president for the ensuing year, and until his successor be chosen. The annual meeting of said board shall thereafter be held annually, and at such meeting a president shall be chosen from their number, to serve for one year, until his successor be chosen.

Section 4. The board of trustees shall have the care, control and supervision of the public historical museum, its appurtenances, fixtures and furniture, and of the receipt, selection, arrangement and disposition of the specimens and objects appertaining to said museum; also of the disbursements of all moneys appropriated for, and belonging to the museum fund, in the manner hereinafter provided; and the said board shall adopt, and at their discretion, modify, amend or repeal by-laws, rules and regulations for the management, care and use of the historical museum, and fix and enforce penalties for their violation, and generally, shall adopt such measures as shall promote the public utility of the museum; provided, that such by-laws, rules and regulations shall not conflict with the provisions of this act.

Section 5. The board of trustees shall, at their first meeting, or as soon thereafter as practicable, and every three years thereafter, at an annual meeting, elect by ballot, a person of suitable attainments and ability as custodian, who shall so act, and he shall be ex-officio secretary of said board of trustees. The custodian first appointed shall hold his office for three years, from the time of the first annual meeting, unless previously removed, and thereafter the term of appointment shall be the term of three years, and the compensation of the custodian shall be fixed by the board of trustees. Said board of trustees shall also appoint such assistants and employes for such museum, as they may deem necessary and expedient, and shall fix their compensation. All vacancies in the office of custodian, assistants and other employes shall be filled by the board of trustees.

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Section 6. The custodian, or other assistants or employes may be removed by the board of trustees for misdemeanor, incompetency or inattention to duty, or for any other cause.

Section 7. It shall be the duty of the board of trustees, within ten days after the appointment of the custodian, and other salaried employes, to report to, and file with the city comptroller, or other proper officer of the city, a full certified list of the persons so appointed, with the salary allowed to each, and the time or times fixed for the payment thereof, and they shall also furnish to said comptroller, or other similar officer, a list of accounts and bills allowed by said board of trustees, stating the particulars thereof, which list of accounts and bills shall be furnished immediately after the meeting of the board at which the same were allowed. And the said board of trustees shall, on or before the first day of October, in each year, make to the common council, or other governing body, a report up to and including the thirty-first day of August of said year, containing a statement of the condition of the museum, the articles added thereto, and the account of all moneys credited to the historical museum fund, and expended on the same, during the preceding year.

Section 8. From and after the organization of such board of trustees, the common council shall levy and collect, annually, upon all taxable property in any such city, at the time and in the same manner as other taxes are levied and collected by law, a special tax not exceeding one-fifth of a mill upon each dollar of the assessed value of said taxable property, the amount of which shall be determined by said board of trustees and certified to the common council, and the said comptroller, or other like officer, at the time of making the annual report to said common council; and the entire amount of said special tax shall be paid into, and held in the city treasury as a separate and distinct fund, to be known as the historical museum fund, and shall not be used or appropriated, directly or indirectly, for any other purpose than for the purchase of a site and the

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erection of a suitable building for such museum, and for the maintenance and increase of said museum, and the payment of the salaries of the custodian, assistants and other employes, or for the purchase of such objects as may be necessary or proper for the purposes of the museum, and for the purchase of fuel and supplies, and for incidental repairs and expenses connected with the museum.

Section 9. The board of trustees may purchase, lease or receive as a gift, any real estate and hold the same for the purposes designated in this act, and shall have the authority to erect, improve, enlarge and repair any building upon the same; but no real estate shall be purchased or leased without a resolution of the common council authorizing the same, nor shall any building be erected, improved or enlarged without a resolution of said common council authorizing the same, and all deeds of conveyances, donations and leases shall be made to the city, and title to all property, save that loaned, shall be vested in such city.

Section 10. All moneys received by, or raised in any such city for historical museum purposes shall be paid over to the city treasurer or other like officer, to be disbursed by him on the order of the president and secretary of the said board of trustees, countersigned by the city comptroller, or other like officer. Such orders shall be made payable to the order of such persons in whose favor they have been issued, and shall be the only vouchers of the city treasurer for the payments from the museum fund. The said board of trustees shall provide for the purchase of books, supplies, fuel and other matters necessary for the maintenance of the museum; provided, however, that it shall not be lawful for said board of trustees to expend, or contract a liability for any sum in excess of the amount levied in any one year for the museum fund, on account of such fund.

Section 11. Whenever any such common council shall, by resolution, direct the purchase of any site for said museum,

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or shall direct the erection of any building for the purposes specified in this act and the sum required to purchase any site, or to erect any building, shall be in excess of the amount which can be raised by the tax herein authorized, during or within the next ensuing year, it shall be lawful, and the said common council is hereby authorized to provide that the taxes herein authorized shall be levied, and the same received and paid into the treasury of such city for a sufficient number of years to raise a fund large enough to meet the designed expenditures, for the purpose of purchasing a site, or erecting a suitable building or both.

Section 12. This act shall take effect and be in force from and after its passage and publication.

Approved March 26, 1897.

No. 248, S.] [Published May 1, 1905.

CHAPTER 135.

AN ACT to amend chapter 111 of the laws of 1897 entitled "An act to provide for the establishment and maintenance of historical museums of cities of the 1st and 2nd classes and to authorize the levy of a tax to purchase, erect and maintain such museums."

The People of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter 111 of the laws of 1897 being an act entitled "An act to provide for the establishment and maintenance of historical museums in cities of the 1st and 2nd classes and to authorize the levy of a tax to purchase, erect and maintain such museums," is hereby amended by adding to the end thereof a new section known as section 11a to read as follows: "Section 11a. Provided however that where a

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public museum or museums already exist and are being maintained in any city of the 1st or 2nd class in this state as defined in section 1, of this act, the board or boards of trustees of such museum or museums shall have and exercise the powers and duties herein conferred upon the board created by this act.

Section 2. All acts or parts of acts contravening the provisions of this act are hereby repealed.

Section 3. This act shall take effect and be in force from and after its passage and publication.

Approved April 29, 1905.

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Resolutions of the Common Council of the City of Milwaukee.

Adopted September 18, 1905.

Whereas, It is desirable to establish and maintain a free historical museum, which shall be a department of the public museum now existing in the City of Milwaukee; now therefore be it

Resolved, By the Common Council of the City of Milwaukee that the Board of Trustees of the Public Museum of the City of Milwaukee is hereby granted the authority to establish an historical museum, which shall be a department of the Public Museum now existing, and which shall be under the control and supervision of the Board of Trustees of the Public Museum as provided in chapter 135 of the laws of 1905, amending chapter 111 of the laws of 1897, and the duties and privileges of said trustees shall be as specified in chapter 111 of the laws of 1897 of the State of Wisconsin.

Adopted September 5, 1906.

Resolved, That pursuant to the provisions of chapter 111 of the laws of 1897 and amendments subsequent thereto, the Common Council of the City of Milwaukee hereby authorizes and directs the Board of Trustees of the historical museum of Milwaukee to acquire, by purchase or condemnation, a site for the said museum necessary for erecting a suitable building thereon for the purposes specified in the act creating the powers for said board.

Countersigned May 15, 1906.

PETER J. KOEHLER,
Deputy Comptroller.

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Twenty-Fifth Annual Report

of the

BOARD OF TRUSTEES

of the

PUBLIC MUSEUM



of the

CITY OF MILWAUKEE

SEPTEMBER 1, 1906, TO AUGUST 31, 1907

NOVEMBER 1, 1907

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TWENTY-FIFTH

ANNUAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

PUBLIC MUSEUM



OF THE

CITY OF MILWAUKEE.

SEPTEMBER 1, 1906, TO AUGUST 31, 1907.

NOVEMBER 1, 1907.

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Board of Trustees

CITIZENS APPOINTED.

Geo. A. West, - - - - - - -	Term expires May 1911
O. J. Habhegger, - - - - - -	Term expires May 1910
Ferdinand Meinecke, - - - - -	Term expires May 1909
Robert Nunnemacher, - - - -	Term expires May 1908

ALDERMEN APPOINTED.

Henry Smith, - - - - - - -	Term expires May 1908
Chas. B. Weil, - - - - - -	Term expires May 1908
Henry Stoetzer, - - - - - -	Term expires May 1908

EX-OFFICIO.

C. G. Pearse, Sup't of Schools, - -	Term expires July 1910
A. S. Lindemann, Pres't of School Board,	Term expires July 1908

OFFICERS.

Robert Nunnemacher, President.
Henry L. Ward, Secretary, Ex-officio.

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COMMITTEES

EXECUTIVE.

Chas. B. Weil, Chairman,
A. S. Lindemann,
C. G. Pearse,
Henry Smith,
Robert Nunnemacher, Ex-off.

PURCHASING.

Henry Smith, Chairman,
Geo. A. West,
Ferd. Meinecke.

FURNITURE.

Henry Stoetzer, Chairman,
O. J. Habhegger,
Chas. B. Weil

EXCHANGING.

Ferd. Meinecke, Chairman,
Geo. A. West,
O. J. Habhegger.

RULES.

A. S. Lindemann, Chairman,
C. G. Pearse,
Henry Stoetzer.

BUILDING.

Henry Smith, Chairman,
Chas. B. Weil,
A. S. Lindemann,
Robert Nunnemacher, Ex-off.

FINANCE.

Geo. A. West, Chairman,
O. J. Habhegger,
Ferd. Meinecke.

Henry L. Ward, Advisory Member of All Committees.

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Honorary Curators

Dr. S. Graenicher,	Ichthyology and Herpetology
Carl Hagenbeck, Stellingen, Germany,	Zoölogy
Albert von Hoffmann,	Archeology
Chas. E. Monroe,	Paleontology
A. J. Schoenebeck, Kelley Brook, Wis.,	Oölogy
August Stirn,	Ornithology
E. W. Windfelder,	At Large

Museum Service

Henry L. Ward,	Director
Chas. T. Brues,	Curator of Invertebrate Zoölogy
Carl Thal,	Curator of Books
Wm. B. Brickner,	Special Clerk
Charles Brandler,	Taxidermist
Geo. Shrosbree,	Taxidermist
Paul C. Rohde,	Assistant Taxidermist
Herbert Clowes,	Landscape Modeler
Henry E. Eichfeld,	Attendant
R. A. Muttkowski,	Attendant
Lydia Nehrling,	Attendant
Alice Pluck,	Attendant
Phillip J. Pier,	Janitor
Fred C. Ruck,	Chief Engineer

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INSPIRER OF THE WISCONSIN NATURAL HISTORY SOCIETY,
WHOSE DONATION WAS THE ORIGIN OF THE
PUBLIC MUSEUM.

FROM AN OIL PORTRAIT BY CARL MARR, NOW IN THE GERMAN-ENGLISH ACADEMY.

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Report of the President of the Board of Trustees.

September 16, 1907.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—As required by statute the Board of Trustees of the Public Museum of the City of Milwaukee herewith presents to you its twenty-fifth annual report on the affairs of the museum.

The Board has held a regular meeting each month of the year and, as business has necessitated, the various committees of the board have from time to time convened in special session.

The most important matter affecting the future of the museum and one allowing of some diversity of opinion was the determination of the direction in which the addition for the historical department should extend. Two courses were open, to continue on Ninth street by acquiring property next north of the museum or to purchase land on Eighth street and build east across the middle of the block from our Ninth street wing to Eighth street, and then south on that street joining to the shorter wing of the building which belongs to the Library, thus completing a parallelogram. After long deliberation the latter course was decided upon as giving more land and at less price than could be obtained on Ninth street, as allowing of the utilization of land already forming part of the plot belonging to this building, and also affording a high and usable basement practically on the level of the street instead of one almost entirely below street level, as would be the case were the addition built on Ninth street.

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The more southerly of the two lots required for this purpose has been obtained by purchase and its title now runs to the city; the other lot is being acquired by condemnation through the office of the City Attorney. Preliminary plans of the building are now being made by the architects.

A considerable number of additions have been made to the collections and exhibits of the museum and their preservation has been zealously looked after.

At the close of the year, Aug. 31, 1907, the inventory was as follows:

Mineralogical and geological specimens	7,995
Paleontological specimens	15,333
Botanical specimens	24,885
Zoölogical specimens	179,772
Archeological specimens	20,756
Ethnological specimens	4,829
Arms, armors, carvings and other objects contained in the Rudolph J. Nunnemacher collection	3,160
Coins, bank notes, medals, etc	2,863
Books, pamphlets, maps, etc	13,874
	273,467

The financial statements for the year follow:

Balance in Museum Fund, Sept. 1, 1906		$6,656.81
Loan		1,500.00
Refunded from various sources		10.05
Appropriation to Museum Fund, for 1907		28,797.87
		$36,964.73
Repaid loan	$1,500.00	
Expenditures for maintenance and increase	25,878.41	
		27,378.41
Leaving a balance on Sept. 1, 1907		$9,586.32
Balance in Historical Museum Fund Sept. 1, 1906		$38,250.95
Appropriation to Historical Museum Fund for 1907		40,317.02
		$78,567.97
Partial payment on land	$4,000.00	
Leaving a balance on Sept. 1, 1907		$74,567.97

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RUDOLPH J. NUNNEMACHER FUND.

Balance, Sept. 1, 1906		$2,731.33
Interest accrued		117.37
		$2,848.70
Expenditures for specimens	$366.50	
Leaving a balance on Sept. 1, 1907		$2,482.20

Fuller details of all these matters may be found in the report of the Director, to which you are respectfully referred.

The Board wishes to express its thanks to those who have by donation or otherwise shown a desire to aid in building up the museum and to the press for its many notices of new exhibits and other matters of public interest.

Respectfully submitted,

ROBERT NUNNEMACHER,
President, Board of Trustees.

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CARVED IVORY SCREEN. ITALY

NUNNEMACHER COLLECTION.

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Report of the Director of the Museum to the Board of Trustees.

Gentlemen—In presenting to you this report on the twenty-fifth year of the activities of this museum as a free municipal institution, I shall also avail myself of this appropriate opportunity to trace such of the salient points of its growth and development as seem especially worthy of note.

During the past year we have had little money to spend upon the collecting or purchase of specimens or of cases; but have done nothing that would in any way curtail the established activities of the institution and have, notwithstanding this handicap, made a fair amount of progress.

The development of the historical department, which we expect will soon become active, will relieve the natural history department from the expense of purchase, preparation and care of all anthropological exhibits and will open to both a promising future of growth and development, towards which we may soon expect to see a decided acceleration.

It is now, we believe, generally acceded that the historical department, to be most satisfactory and in the fullest degree educational, must embrace all of anthropology from the earliest indications of man's presence in any part of the world down to local history. Thus only can a true and intelligible sequence be maintained; for modern history is not inconsiderably influenced by national and racial traits that can be understood only by the study of more ancient peoples; and only by such a treatment will the historical department properly anastomize with that of natural history.

Looking to the possibilities of the future we can not fail to entertain most optimistic views for the development of all these departments so as to form a homogeneous whole, an institution

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During the year I have managed to publish the following papers based either on museum work or specimens, besides which I have delivered several public addresses and written several letters to the local press which I believed to be to the interest of this institution.

1. Notes on The Herring Gull and Caspian Tern, Bull. Wis. Nat. Hist. Soc'y, Vol. 4, pps. 113-134, 2 pls. ('06).

2. A Remarkable Ceremonial Object from Michigan, Bull. Wis. Nat. Hist. Soc'y, Vol. 4, pps. 160-161, 1 pl. ('06).

3. A Weasel New to Wisconsin's Fauna, Bull. Wis. Nat. Hist. Soc'y, Vol. 5, pps. 63-64 ('07).

4. The Anthropological Exhibits in the American Museum of Natural History, Science, Vol. XXV, pps. 745-746 ('07).

5. The Library and the Museum, The Library Journal, Vol. 32, pps. 307-311 ('07).

DONATIONS.

In numbers of gifts the records of this year exceed those of last. A large part of these consist of birds which, having flown against wires or windows or been subjected to unusually cold and stormy weather, have been picked up dead. The inclemency of the spring of this year produced an unusual mortality among the migrating birds, more especially the warblers, and many of these, in one instance 21 in one day, were brought to us. Many are such as can be used in school work and all are welcome in building up the study series of skins.

A considerable collection embracing rocks, minerals, butterflies, snakes, birds' eggs, ethnological specimens, ceramics, bronzes and United States coins was bequeathed to the museum by an estimable citizen who died this year. Unfortunately, he had not informed himself as to modern methods of exhibition or the policy of this museum in relation to gifts and, wishing to erect a memorial to himself and wife, willed these with the proviso that a separate case or cases bearing a specified inscription should be set apart for them. There are a number of valuable articles in the collection which we would greatly like to own and exhibit, but it was impracticable for the trustees to accept the gift under the terms of the will as it would neces-

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GIRAFFE.

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sitate exhibiting a large number of unrelated objects in connection with each other and entirely removed from their proper places in the scheme of the museum. Also the collection contained various trivial objects not suited at all to such exhibition. Unless the terms of the will can be very liberally construed we will be unable to accept the collection and the giver will have entirely failed in his laudable intentions to in this manner benefit the public and perpetuate the memory of himself and wife. Had he been informed of our policy in such matters he undoubtedly would have conformed to them.

We trust that others wishing to bequeath collections to the museum will communicate with the proper officials in order that there may be no miscarriage of their intentions.

COLLECTING.

Lack of both money and time this year curtailed, as it did last year, the collecting that we would have liked to have done. Aside from several short trips, mainly for insects, made to nearby localities, there was but a single expedition in which Messrs. Brues, Shrosbree and myself took part. We collected at Divide, Vilas Co., Mercer, Iron Co., and at the Apostle Islands; being in the field less than three weeks.

We hope before long to have at least one collector in the field in Wisconsin practically all the year round. The mammalian fauna of the state is very imperfectly known, and its exact distribution is even less a matter of record, so that anything approaching a correct list of the mammals of Wisconsin is still a desideratum. The same may be said of most classes of animals, including even to a considerable extent the birds which of all have received the most study and are by far of the greatest popular interest. There is much need of field work on our fauna and flora and it is a labor that it is eminently the function of a museum to take up, work out and publish, besides at the same time adding much valuable and greatly needed material to its collections.

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It can easily degenerate into a series of disconnected special exhibits for this or that association or individual, in which historical continuity will be lost, and the entire exhibit rendered well nigh valueless in its educational influence; or it can mark out a definite plan, broad enough to include everything worthy of record, and then place its objects, when loaned or acquired, exactly where they belong in this scheme and thus present an orderly sequence that will be at once pleasing and very instructive.

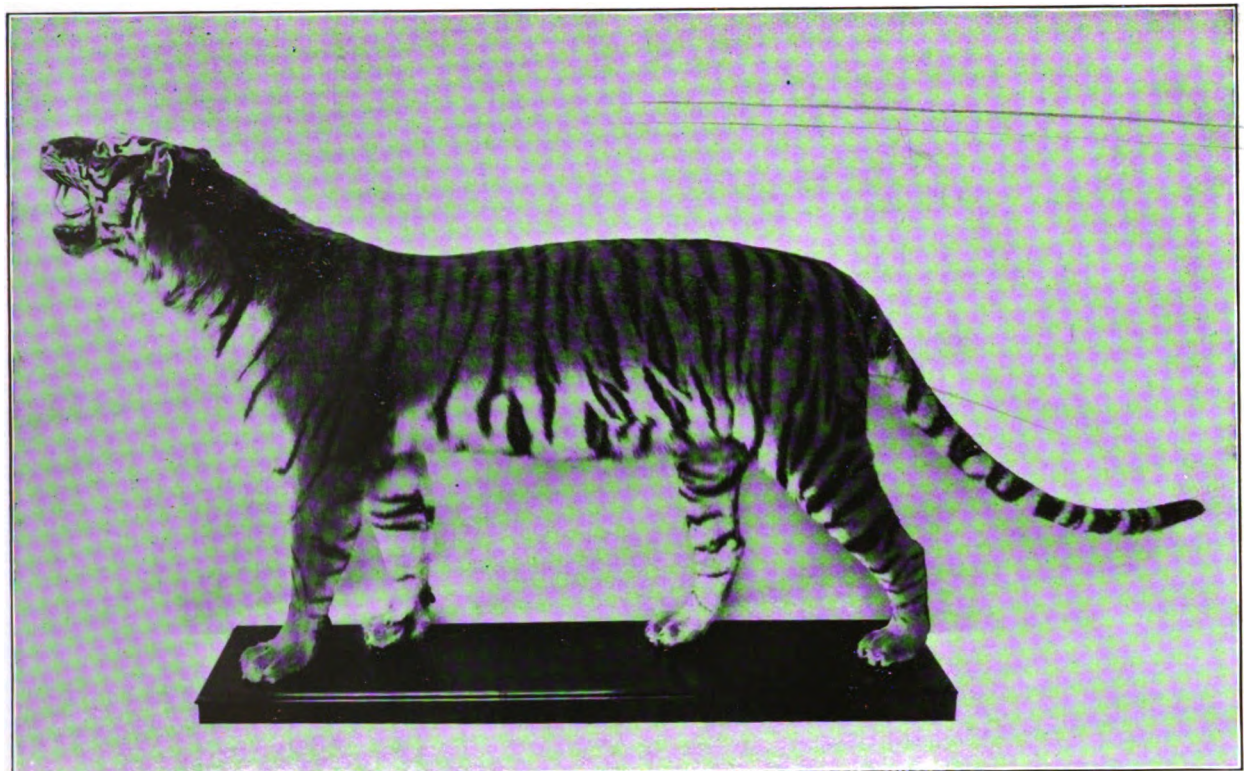
In the presentation of materials for this collection it is to be hoped that our citizens will keep this in mind and work first of all for the good of the whole rather than to unwittingly embarrass the management by attempting the imposition of restrictions regarding the manner of display of their gifts or loans. An orderly and scientific arrangement will ultimately redound much more to their credit than would a lot of separated and non-sequential, individual monumental exhibits. The possibilities of such a department are almost boundless, and if it can be safely guided between Scilla and Charybdis, it will probably in a few years become of much greater interest than our already very popular natural history museum.

Some time previous to the completion of the building we hope to add to our staff some men well trained in anthropological and historical matters, so that the department will be properly organized and ready to begin active work at the earliest possible moment. We anticipate that a more or less extensive canvass of the state for the purpose of securing desirable specimens will be advisable.

RUDOLPH NUNNEMACHER COLLECTION.

A collection of thirty specimens from Lolo and Thibet, but mostly from the former little known province of China, was purchased from the original collector. These, as far as known, are the only specimens from the Lolos in any museum in this country. Thirty-five specimens of Chinese dress and orna-

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BENGAL TIGER.

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ment from Hangchow were purchased from the missionary who collected them. Two flint-lock guns, one double-barrelled muzzle-loading rifle of Milwaukee manufacture and twelve pistols were purchased for the collection of firearms.

Six narrow horizontal cases have been constructed and placed beneath the gun cases in which will be arranged the collection of pistols.

During his sojourn in Europe, Trustee Robert Nunnemacher purchased various specimens of which an ivory screen from Italy, a porcelain plate from Copenhagen, a porcelain parrakeet of Royal Saxony ware and a huge German powder flask of bone, with engraved hunting scenes upon the sides, have reached us.

During the installation of one of our large bird groups the sash was left open for some days and some miscreant removed the lock. Shortly afterwards one of the cases in the Nunnemacher room was unlocked, a Japanese carving of a crocodile costing $190.00 was removed, and the case relocked, indicating that the thief had made a key from the previously stolen lock. The police were unable to obtain any clue to the thief nor has the specimen been recovered.

MAMMALS.

During the year 48 mammals were mounted, of which four were old, poorly prepared specimens long on exhibition, which were taken down and remounted. The larger of the freshly mounted specimens were a giraffe given last year by Ringling Bros., a Bengal tiger, a snow leopard and two California sea lions. The latter two animals died in the Zoo in West Park, and were presented by the Park Commission. They were added to the group of these animals collected on one of the museum's expeditions of 1903.

Two groups of small animals are included in the above count of specimens mounted. One is a group of grey rabbits with their young mounted in one of the quadruple group cases

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and lighted by concealed electric lamps. A curved painted background depicts the rolling cleared lands of eastern Wisconsin. The other group is of field mice, two nests, adults and young.

The Badger group which, appropriately for a "Badger State" museum, stands at the entrance of the mammal hall, has been re-finished and furnished with a scenic background and new plant accessories, materially improving its general appearance. A new background was also painted by Mr. Peter for the summer group of weasels. There are several other groups that may be considerably enhanced by well painted backgrounds, which should be attended to as money for this purpose is available.

Twenty-five skins were made up of mammals secured in the flesh and a dozen or more of specimens previously in brine, a considerable number of skulls were cleaned, many identifications were made and the skin collection rearranged as well as was possible in its present inadequate and unfortunately situated location in drawers beneath the exhibition cases.

Fifty mammals have been added during the year.

BIRDS.

The year has been marked by the completion and placing on exhibition of our two largest bird groups, each sixteen feet in width and with backgrounds painted by Mr. Peter. The first of these was the group of nesting Herring Gulls and Caspian Terns, work on which was begun with the collecting in 1905 of most of the eighty-six birds and the accessories used in the group. In 1906 we made the necessary study of the colony by means of an observation tent and camera, but unfortunately the terns were not present that year. The attitudes of the gulls are all based on photographic records and show some of their unexpected actions that my observations revealed. In this group the background is flat, occupying only the back

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of the case. It is a faithful representation of a portion of the nesting site, Gravel Island.

The other large group represents those birds breeding in the Green Bay and Oconto marshes late in June. Two years collecting and observation is also represented in this group which is in reality an ecological study. There are fourteen species, mostly represented by adults of both sexes, nests and young, sixty-nine mounted birds in all. The problem of grouping such a large number of birds in a dense marsh and yet having all visible and natural in disposition, was not an easy one, but the difficulties seem to have been met by the taxidermist in a manner meriting the approval of such competent judges as have seen the group. In this group the background covers the ends as well as the back of the case, coving at the corners. In all it is twenty-eight feet in length by seven in height, and seemingly extends the accessories to the limit of vision.

A group of ruffs has been mounted to illustrate individual variation in colors of birds.

A number of pigeons have been added to the series of these birds, illustrating the effects of artificial selection, and the whole series has been moved to a larger case.

A limb of an oak tree studded with 175 acorns deposited by the California woodpecker, which was given to the museum some years since by the late Walter Bryant, has been mounted with three birds of this species to show this interesting habit; family groups of adults, young and nests of the spotted sandpiper, red-headed woodpecker, crow, tree swallow, barn swallow and phoebe, have been made and 74 single birds mounted. From specimens in the flesh 5 have been prepared as skeletons and 368 as skins.

The collections have been increased by six hundred and fifty more birds than were discarded or otherwise disposed of, and fifty-three eggs and nests.

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OTHER VERTEBRATES.

Most of the work on reptiles, amphibians and fishes was in the nature of improvements of the previously existing exhibits of these animals rather than in the preparation of new specimens or in additions to the collections.

Dr. S. Graenicher, honorary curator of ichthyology and herpetology, very kindly devoted many hours to the preparation of copy for labels afterwards printed for the collection of snakes. These give common and scientific names, geographical range and provenience.

Class and ordinal descriptive labels for all of these animals, as well as individual labels for their skeletons, were also printed. and some few of the mounted and alcoholic specimens of reptiles and amphibians were likewise provided with printed cards.

Four mounted specimens and a dozen or so wet preparations were added to the exhibition. Fifty-five specimens were received.

INVERTEBRATES AND BOTANY.

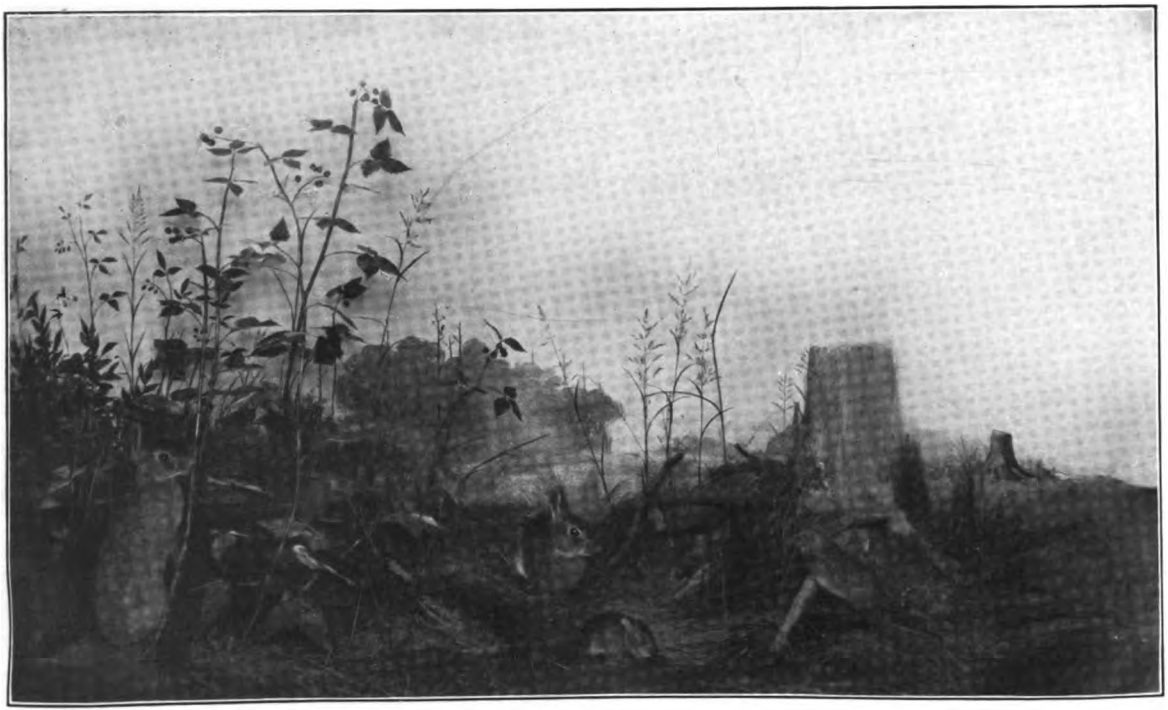
The report of the curator having these departments in charge will be found following mine.

PALÆONTOLOGY AND GEOLOGY.

An occasional specimen has been added here and there to the exhibits in these departments. No purchases of account have been made and the donations have been phenomenally small. Over a thousand dollars of the amount charged in the financial statement of the year to the account of Fossils and Casts was money owed on the mastodon skeleton purchased the year previous.

Presumably the same thief, referred to as stealing an ivory carving of a crocodile from the Nunnemacher collection, six days earlier unlocked one of the mineral cases, took from it

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GROUP, GRAY RABBITS AND YOUNG.

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our two best gold specimens and relocked the case. One consisted of sponge gold from Australia, the other was a quartz pebble from California with a large amount of gold showing. The two specimens represented about $90 bullion value. The thief has not been apprehended.

NUMISMATICS.

No attempt has been made to build up this series; but a single coin having been purchased during the year. When the addition to the building furnishes a more secure place for exhibit of such a collection we will probably have presented a good collection, now belonging to the son of one of the present trustees.

THE LIBRARY.

The report of the curator of this department follows that of the curator of invertebrate zoology.

INVENTORY.

7,995	Mineralogical and geological specimens.
15,333	Paleontological specimens.
24,885	Botanical specimens.
1,123	Protozoans, sponges, corals, echinoderms, etc.
100,453	Mollusks.
59,420	Insects (estimate).
313	Crustaceans.
403	Fishes.
1,150	Batrachians and reptiles.
8,956	Birds.
6,293	Birds' eggs and nests.
1,661	Mammals.
20,756	Archeological specimens.
4,829	Ethnological specimens.
3,160	Arms, armors, carvings and other objects of virtu, contained in the Rudolph J. Nunnemacher collection.
2,863	Coins, bank notes, medals, etc.
13,874	Books, pamphlets, maps, etc.
273,467	Total number of specimens.

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FINANCIAL STATEMENT OF THE MUSEUM.

Debit.

Balance in Museum fund Sept. 1, 1906	$6,656.81
Loan	1,500.00
Refunded from various sources	10.05
Appropriation to Museum fund Jan. 1, 1907	28,797.87
	$36,964.73

Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:		
Anthropology and ethnology	$149.65	
Birds	364.60	
Building repairs	53.75	
Cleaning supplies	85.40	
Fossils and casts	1,039.00	
Furniture	1,081.83	
Gas (Museum)	10.72	
Insurance	47.50	
Invertebrates	61.39	
Library	304.75	
Loan	1,500.00	
Mammals	30.25	
Minerals and rocks	.75	
Miscellaneous	126.76	
Payroll	18,875.81	
Permanent improvements	111.73	
Postage and freight	220.40	
Power department (fuel)	1,585.44	
Power department (gas)	14.05	
Power department (materials)	232.71	
Power department (permanent improvements).	17.10	
Power department (repairs)	1.75	
Preparation supplies	338.63	
Stationery and printing	208.96	
Telephone	72.00	
Traveling	278.78	
Wages	484.17	
Water	80.53	
		27,378.41
Balance in Museum fund Sept. 1, 1907		$9,586.32

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FINANCIAL STATEMENT OF THE HISTORICAL MUSEUM.

Debit.

Balance in Historical Museum fund Sept. 1, 1906	$38,250.95
Appropriation to Historical Museum fund Jan. 1, 1907	40,317.02
	$78,567.97

Credit.

Amount paid by warrant on the City Treasurer, for first partial payment on Lot 9, Block 174, Fourth Ward	4,000.00
Balance in Historical Museum fund, Sept. 1, 1907	$74,567.97

FINANCIAL STATEMENT OF THE RUD. J. NUNNEMACHER FUND.

Debit.

Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1906	$231.33
Paid over to City Treasurer by the Rud. J. Nunnemacher estate, Sept. 10, 1906	500.00
Annual interest paid to City Treasurer Dec. 14, 1906	117.37
	$848.70

Credit.

Amounts paid by warrants on the City Treasurer since last annual statement was rendered:	
For specimens	366.50
Balance of Rud. J. Nunnemacher fund in the city treasury Sept. 1, 1907	$482.20

LIST OF FIRE INSURANCE.

American Insurance Co., of Newark, N. J	$2,000.00
Commercial Union Assurance Co., Limited, of London	2,000.00
Concordia Fire Insurance Co., of Milwaukee	2,000.00
Franklin Fire Insurance Co., of Philadelphia	2,000.00
German Fire Insurance Co., of Pittsburg	2,000.00
Home Insurance Co., of New York	2,000.00
National Union Fire Insurance Co., of Pittsburg	2,000.00
Phenix Insurance Co., of Brooklyn	2,000.00
Royal Insurance Co., of Liverpool	2,000.00
Springfield Fire & Marine Insurance Co., of Springfield, Mass.	2,000.00
Westchester Fire Insurance Co., of New York City	2,000.00
Total	$22,000.00

BOILER INSURANCE.

Casualty Company of America, New York, ½ of $25,000.

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BUILDING AND EQUIPMENT.

Notwithstanding that all air taken into the building and distributed by the ventilating fans has been passed through a bed of sprayed coke, it has been found that much black dust was continually settling on cases and furniture. By experimentation the engineer has discovered the startling fact that the air contained a greater amount of this dust after passing through the washer than it previously held. It seems that the great velocity given it by the fans has actually disintegrated and put into circulation minute fragments of the coke. He is now experimenting to find a filter that will not contaminate the air that it is expected to purify.

The downspouts have been largely renewed, skylights repainted and other minor parts of the building put into repair.

One mosaic floor panel, 8′ 3″ x 11′ 9″, in front of the trustees' room, became loose and was relaid by an employee, but at a cost in wages of $572 and for material $29.62, money that we would much rather have spent on specimens which probably would have been of greater interest to the public than scrolls in the floor over which they walked.

Six long, narrow and shallow cases were made and placed horizontally beneath the vertical gun cases on the walls of the third floor hallway. These are to contain the pistols of the Nunnemacher collection. A bulletin board on which are posted items of general interest to visitors has been made and installed in the rotunda.

Action by the trustees of the Public Library in establishing vacations for their employees, considerably greater than those allowed by the museum, accentuated the difficulties of jointly administrating the so-called power department. Under the museum's rules the employees of this department were entitled to two weeks vacation. Under the library's rules they were entitled to two weeks and ten days, and of course they all wished to take the longer period which was unallowable under

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NESTING GROUP, HERRING GULLS AND CASPIAN TERNS.

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museum rules. An agreement was made between the two boards by which the administration of this department will be alternate instead of joint as heretofore, and by which the Library takes charge for the present calendar year.

At the same time a readjustment of the proportion of cost to be borne by each institution was made. On account of the greater size of the museum, its heating and ventilating cost more than do these items for the Library, but as the Museum closes at 5:30 and the Library remains open until 9 P. M., the greater cost of lighting falls upon the Library. All these factors I had calculated so that after conceding in favor of the Library the odd percentages an adjustment was arrived at that saves to the Museum something over a thousand dollars in the ordinary cost of running of that department.

The engineer's report for the year ending Dec. 31, 1906, shows that the combined number of hours run of the two ventilating and heat distributing fans was 8,570, the kilowatt hours of the three engines was 293,953, the total consumption of coal was 1,331.7 tons and the total expense of the department for the year was $10,016.32, a decrease of over $600 on the year previous.

HISTORICAL.

Retrospection is often of material value in shaping the future course of an institution and it will at least be of some interest to those who now or in the past have been connected with the museum to glance back over its history and note something of its phylogeny, embryology and subsequent growth during the quarter century of its existence.

For obvious reasons it would be highly inappropriate for me to attempt a critical or comparative analysis of the various periods into which its administration may be divided either by the terms of the presiding officers of its board of trustees or of those immediately in charge of the institution. Changes in the latter administrative officers have naturally brought some

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Alderman August Stirn circulated a petition, suggesting the tender of the museum to the city, which was signed by many leading citizens and business houses, and was presented both to the Natural History Society and to the common council.

At a meeting of the directors of the society held on Feb. 7, 1882, a letter was received from the Common Council announcing the appointment of a committee consisting of Aldermen Paine, Stirn, Swan, Rauschenberger and Perrigo to confer with the society on the proposed transfer of the museum.

The society appointed Messrs. Chris. Preusser, Adolph Meinecke, C. H. Doerflinger, G. Bossert and Joshua Stark to represent it in the conference. On Feb. 17th the committee returned a favorable report. This was considered by the society, which voted to donate its collections, which it valued at $30,000*, to the city, at the same time placing the latter under moral obligations to "conduct the museum and increase its collections with special reference to the main purposes of the Society, to-wit: Public instruction, and the provision of materials and helps for Scientific Investigation."

On April 13, 1882, the state legislature published an enabling act, Chapter 329, authorizing the directors of the Natural History Society to convey to the city the natural history collections belonging to the society "in trust, to be kept, supported and maintained by said city, as a free Museum for the benefit and use of all citizens of said city." On the following day the legislature published Chapter 328, authorizing the city to accept the gift and providing for the appointment of trustees, the collection of a special annual tax, based on a fixed proportion of the assessed valuation of all taxable property in the city, which was to be held as a separate and distinct fund for the maintenance and increase of the museum.

The board of trustees organized Feb. 20, 1883, elected Chas. H. Doerflinger custodian of the museum and secretary

* The combined number of specimens and books transferred was about 19,390, which, calculated on the inventory of 1884, had an appraised value of about $13,573.

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NESTING GROUP, AMERICAN CROW.

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of the board of trustees, and took formal charge of the collection received from the Natural History Society, which consisted of approximately 19,120 specimens and 270 books, maps and charts.

Some 7,000 square feet of space was rented in the late "Exposition Building," and the work of renovating, moving and installing the museum was undertaken. A large collection of natural history specimens was, at the instigation of the directors of the Exposition Association, being exhibited by Ward's Natural Science Establishment. A special committee consisting of thirteen citizens was formed to try and effect the purchase of this for the museum. On Dec. 17, 1883, they contracted for it at the price of $12,000, and by popular subscription completed its purchase on Oct. 3, 1884. In the meantime the two collections had been joined and arranged in the museum's rooms, and on May 24, 1884, the museum was, with fitting ceremony, thrown open to the public.

SUBSCRIPTIONS FOR COLLECTIONS.

Several times since then the museum has by recourse to popular subscription secured important collections which were beyond its means to purchase. Chief among which were:

1886, part of the F. S. Perkins archeological collection, 3,156 copper, flint and stone implements, for $2,000.

1896, the H. H. Hayssen collection of archeological specimens, mostly from Wisconsin, for $2,500, of which there was raised by subscription $1,855.

1897, P. P. Peck collection of 452 minerals, for $800.

GIFTS.

The donations of specimens and collections have been numerous and important. The lists have filled many pages of each of the annual reports which cannot be reproduced here. They have ranged from the bequest of Rudolph J. Nunnemacher of his collection of 1,815 objects of arms, armors, carv-

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ings, etc., inventoried at $70,030.35, and of $10,000 for the increase of the collection, to the butterfly or dead bird brought in by a primary school child.

The museum's purchases have only been limited by the means at its disposal, which have never equaled its necessities. These separate purchases have ranged in numbers from single specimens to the Wheatly collection of about 48,000 fresh water shells, and in value from a few cents into thousands of dollars.

GROWTH.

The inventories have shown a close approximation rather than an absolute count of all of the specimens in the museum. They are as follows:

	Specimens.	Library Numbers.
1883	19,565	328
1884	26,090	737
1885	33,183	788
1886	42,548	886
1887	44,423	986
1888	94,289	1,284
1889	None taken.	
1890	144,287	3,765
1891	147,815	4,225
1892	149,037	4,693
1893	156,380	5,036
1894	164,608	5,560
1895	168,020	5,953
1896	170,588	6,497
1897	175,985	7,193
1898	202,802	8,101
1899	204,811	8,826
1900	210,379	9,353
1901	None taken.	
1902	228,683	9,258*
1903	234,890	10,382
1904	242,232	11,081
1905	248,216	11,808
1906	254,765	12,730

* Previous to 1902 each issue of serials was given a separate library number. In that year a new inventory was taken and numbers given only to complete volumes. In reality, in 1902 the library contained many more volumes than in 1900, although by the inventory appearing to have less.

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SPACE AND BUILDING.

Almost from the beginning the question of space became a vital one. In 1885 Acting President Ch. Preusser in his report advocates that a building suitable for both the Museum and Library be provided.

In 1889 President F. C. Winkler announced that the legislature had authorized the Common Council to issue bonds for the purchase of a site and the erection of buildings for the museum and library, and in 1890 the city purchased the present site at a cost of $150,000.

In 1893 the museum secured some 3,000 additional feet of space from the Exposition Company, which in the following year was increased by about 2,000 feet, making in all 12,000 feet at its disposal, which, however, was quite inadequate to exhibit all of its collections, large portions of which were packed in boxes.

The construction of the present building, which with its original furnishings cost $628,301.42, began in 1896, and on July 6, 1898, the moving of the collections to its still unfinished halls began. This work was let by contract to the late Prof. H. A. Ward, who occupied twelve days in making the transfer.

The arrangement of the collections in the new cases and building was mainly the work of the late H. L. Preston, whose services were secured from the Ward Establishment for that purpose. The museum was opened to the public on Jan. 23, 1899, having been closed about six and a half months.

It appears to have been supposed that the new building, affording 38,000 square feet of exhibition room for the museum, was sufficiently large for all time; but when the collections were arranged it was found to be fairly well filled in all departments and crowded in some, so that in a short time agitation for an addition began.

In 1904 it was discovered that a law had been enacted in 1897 allowing cities of the first and second class to establish

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historical museums, and an amendment was secured in 1905 giving to the trustees of already established public museums the powers and duties conferred on trustees of historical museums by this previous act. On Sept. 5, 1906, the Common Council of the city passed a resolution establishing an historical museum as a department of the Public Museum. Two annual appropriations for this purpose have already been collected, the requisite additional land is being secured and the addition to the building will be erected as soon as practicable. It would have been much better had the future growth of the museum been foreseen when the present structure was planned, so that the architecture might have been modified accordingly and a sufficiently large site originally secured.

FINANCES.

By a wise provision of the legislature in empowering the museum trustees to certify from year to year to the Common Council the amount of money required to run it, which amount must fall within a fixed percentage of the assessed valuation of the taxable property of the city, the museum is exempt from the necessity of lobbying for its annual appropriation. At first the limit was fixed at 1/10 of a mill on each dollar, but in 1897 was increased to 1/7 of a mill. The historical department carries a separate appropriation of 1/5 of a mill. The amounts appropriated have been as follows:

1883	$6,000.00	1896	$14,207.87
1884	6,999.96	1897	14,377.16
1885	7,000.00	1898	20,500.00
1886	7,000.00	1899	20,500.00
1887	7,000.00	1900	21,032.77
1888	8,264.17	1901	21,710.27
1889	8,897.21	1902	20,000.00
1890	9,654.84	1903	23,603.55
1891	10,049.82	1904	24,554.48
1892	10,548.40	1905	26,331.67
1893	11,367.51	1906	27,322.11
1894	12,392.91	1907	28,797.87
1895	13,588.45		

HISTORICAL DEPARTMENT.

1906	$38,250.95	1907	$40,317.02

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HOURS OF PUBLIC ADMISSION.

At the beginning the museum was open:

On Saturdays, from 1 to 5:30 and from 7 to 9 P. M.
On Sundays, from 9 to 12 A. M.
On other days, from 1 to 5:30 P. M.
It was closed on all holidays.

In 1885 the Saturday hours were made continuous from 1 to 9 P. M.

In 1887 the Saturday hours were again disconnected and arranged as at first.

In 1892 the evening hours were discontinued and the Sunday hours changed, the museum being open:

On Sundays, from 1:30 to 5 P. M.
On all other days, from 1 to 5:30 P. M.

In 1893 the Saturday hours were extended to include from 9 to 12 A. M.

In 1899 the regulations were so altered as to entirely close the museum to visitors on Mondays.

In 1902 the hours were:

On Sundays, from 1:30 to 5 P. M.
On other days of the week, from 10 A. M. to 5:30 P. M., except Mondays, when it was closed.

In 1903 the hours were:

On Sundays, from 1:30 to 5 P. M.
On Mondays, from 1:30 to 5:30 P. M.
On all other days of the week, from 9 A. M. to 5:30 P. M.

In December, 1905, the hours were changed to:

On Sundays, from 1:30 to 5 P. M.
Other days, including all holidays, 9 A. M. to 5:30 P. M.

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SPECIAL EDUCATIONAL FEATURES.

In 1884 Mr. Doerflinger in his annual report suggested the formation of a "School Loan Collection," but appears not to have been able in this formative period to himself find money or time to bring his idea to fruition.

In 1889 we find that Mr. Wheeler distributed minerals, birds and mammals to the schools, presumably as gifts rather than loans.

In 1895-6 Mr. Nehrling had mounted a large number of birds for school loan collections, prepared archeological collections and purchased 50 small collections of rocks and minerals.

In 1903 I added mounted mammals and series of butterflies and moths; in 1904 revised and materially altered the archeological collections, and from year to year have added to the numbers and species of birds in circulation.

In 1906 there were in the circulating collection: cases of archeology; 6 species of mammals represented each by from five to fourteen specimens; 26 species of birds in the regular series, represented by from seven to forty-eight specimens each; 33 species with but a few specimens each; the more common butterflies and moths of the region, represented by ten species of each mounted in a case; a geological collection, consisting of thirteen common minerals and twenty-seven rocks.

The distribution by calendar years has been as follows:

Year.	Number of Loans.	Number of Specimens or Collections Loaned.
1898	25	82
1899	35	133
1900	15	67
1901	7	31
1902	20	120
1903	64	342
1904	129	576
1905	116	645
1906	394	1,026

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NESTING GROUP OF MARSH BIRDS.

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In 1887 Mr. Wheeler inaugurated lectures at the museum to the eighth grade pupils of the public schools. Each class received four lectures on well chosen subjects, which were delivered by himself, and again repeated in 1888; but on account of the absence of available room in the museum they were that year given in the high school. Lack of time for this work necessitated his giving notice of the discontinuance of the lectures, and he suggests that the "School Board will undoubtedly find it of advantage to employ one or more persons to impart instruction on carefully selected specimens in the Museum."

In 1900 the school board appointed Mr. Lindsay Webb as Museum Lecturer, and we find that "four classes averaging about 200 children per day, are instructed in the Museum."

The following year he was succeeded by Miss Harriet B. Merrill, who occupied the position until December, 1906. It has been estimated that about 20,000 children per annum attended these lectures, which were held in the museum in a school room set aside for that purpose.

VISITORS.

While the museum was in the Exposition Building a detailed record was kept of the number of visitors, but when it changed habitats the physical difficulties of making such counts were so great that after a few months they were abandoned.

The number of people visiting a museum must be one of the criteria by which to judge how successfully it is fulfilling its mission. We are confident that the number of annual visitors is several times that indicated at the close of the statistics, but to attempt to state this in figures would be to give utterance to a pure guess.

As given in the annual reports, the numbers are as follows:

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1884,	from May 24th	to	Aug. 31st			10,980
1885,	" Sept. 1st	of previous year	to	Aug.	31st	51,742
1886,	" "	"	"	"		48,250
1887,	" "	"	"	"		45,205
1888,	" "	"	"	"		59,644
1889,	" "	"	"	"		82,873
1890,	" "	"	"	"		52,971
1891,	" "	"	"	"		67,241
1892,	" "	"	"	"		82,758
1893,	" "	"	"	"		84,311
1894,	" "	"	"	"		27,234
1895,	" "	"	"	"		88,320
1896,	" "	"	"	"		103,681
1897,	" "	"	"	"		89,698
1898,	" "	"	"	June	30th	77,283
1899,	from Jan. 23rd	to	Aug. 31st			121,809

TRUSTEES.

The general management of the museum has been in the hands of a board of nine trustees, consisting of four citizen members, serving four years each, three aldermen, serving two years each, all appointed by the Mayor; and, ex-officio, the President of the board of School Directors and the Superintendent of Schools.

Many of the leading business and professional men of the city have been on the board. Their names, class under which serving and periods of service are as follows:

PRESIDENTS OF THE BOARD OF TRUSTEES.

Period of Service.

F. C. Winkler.....1883-1891
William Geuder.....1891-1892
Geo. W. Peckham.....1892-1896
E. W. Bartlett.....1896-1900
E. W. Windfelder.....1900-1907
Robert Nunnemacher.....1907

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TRUSTEES OF THE PUBLIC MUSEUM.

Period of Service.

F. C. Winkler.....1883-1891
Ch. Preusser.....1883-1894
Adolph Meinecke.....1883-1901
Thos. A. Greene.....1883-1896
*August Stirn.....1883-1884
August Stirn.....1891-1899
*C. H. Swan.....1883-1884
*Thos. H. Wood.....1883-1885
†Joshua Stark.....1883-1884
‡James McAlister.....1883-1884
†Paul Bechtner.....1884-1885
*Paul Bechtner.....1886-1889
‡W. E. Anderson.....1884-1892
*Thos. H. Malone.....1884-1887
*Wm. Rauschenberger.....1884-1886
†Wm. Rauschenberger.....1889-1890
†John L. Mitchell.....1885-1886
*John McGee.....1885-1888
†Geo. J. Obermann.....1886-1889
*W. F. Kraus.....1886-1887
*Chas. E. Meyer.....1887-1889
*Oscar Altpeter.....1888-1890
*Paul Muenzberg.....1889-1891
*Thos. F. Ramsey.....1889-1892, 1894-1898
*John Guerin.....1890-1892
†Wm. Geuder.....1890-1892
*Theo. Otjen.....1891-1894
*Herman Fehr.....1892-1894
*F. Niezorawski.....1892-1894
‡Geo. W. Peckham.....1892-1896
†W. J. Turner.....1892-1894
Julius Goldschmidt.....1894-1898
*Chas. Koehler.....1894-1896
*James R. Williams.....1894-1896
†James M. Pereles.....1894-1895
E. W. Bartlett.....1895-1900
†Julius Bleyer.....1895-1896
*W. H. Stevens.....1896-1898
*Herman Buth.....1896-1898

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†A. J. Lindemann.....1896-1897
Chas. L. Kiewert.....1897-1902
‡H. O. R. Siefert.....1897-1904
†Chas. Quarles.....1897-1898
*Henry Smith.....1898-1900, 1906
*Geo. Thuering.....1898-1900
*Wm. Murphy.....1898-1904
†F. M. Hoyt.....1898-1899
E. W. Windfelder.....1899-1907
†B. F. Zinn.....1899-1900
Robt. Nunnemacher.....1900
*E. F. Deuster.....1900-1902, 1904-1906
*E. J. Hansen.....1900-1902
†G. W. Augustyn.....1900-1901
Ferd. Meinecke.....1901
†H. H. Schwarting.....1901-1902
*C. J. Fitzgerald.....1902-1904
*T. J. Pringle.....1902-1906
Fred. Grossenbach.....1902-1906
†J. A. Sheridan.....1902-1903
†Jeremiah Quin.....1903-1904
*R. B. Mallory.....1904-1906
‡C. G. Pearse.....1904
†A. G. Wright.....1904-1905
†A. S. Lindemann.....1905
O. J. Habhegger.....1906
*Chas. B. Weil.....1906
*Henry Stoetzer.....1906
Geo. A. West.....1907

EMPLOYES.

The successes or failures of an institution of this sort depends much on those who plan and execute the work. Arrangement and labelling of exhibits, the character of the taxidermic work, the efficiency of clerical and attendant forces all work for the value and attractiveness of the museum.

* Aldermen.
† Presidents of Boards of School Directors.
‡ Superintendents of Schools.
Citizens unmarked.

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Since the beginning of the museum the staff and employes have been as follows, with the official designations of their positions as given:

Directors of the Museum (until 1905 called "Custodians"), (also Secretaries ex-officio of the Board of Trustees)—

Chas. H. Doerflinger.....Feb. 1883 to Sept. 1887
Wm. M. Wheeler.....Oct. 1887 to Aug. 1890
Henry Nehrling.....Sept. 1890 to July 1901
Henry L. Ward.....April 1902

Assistant to the Custodian—

Carl Thal.....1888 to 1889

Assistant Custodian—

Carl Thal.....1890 to 1904

Special Clerk—

Wm. B. Brickner.....1900

Curators—

Chas. T. Brues.....Invertebrate Zoölogy,—1905
Carl Thal.....Books,—1905

Entomologist—

Fred Rauterberg.....1897 to 1902

Palaeontologist—

A. W. Slocom.....Nov. 1, 1900, to April 30, 1901

Conservator—

Thure Kumlien.....1884 to Aug. 1888

Taxidermists—

C. E. Akeley.....1889 to 1891
Geo. B. Turner.....1892 to 1898
Geo. Shrosbree.....1899 to Oct. 1900; Nov. 1902
Charles Brandler.....1901

Landscapé Modeler—

Herbert Clowes.....1899 to 1900; 1902

Taxidermist Apprentices—

Paul C. Rohde.....1898 to 1903
John F. Fidlin.....Dec. 1899 to 1902

Assistant Taxidermists—

Alexander Goethel.....1894 to 1898
Paul C. Rohde.....1903

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Attendants—

Miss Fanny Rauterberg.....1892 to 1893
Miss Lydia Nehrling.....1893
Miss Lina Spankus..... 1894
Miss Alma Waldbarth.....1895 to 1897
Miss Olive C. Wheeler.....1898 to 1904
Charles E. Brown.....1898 to 1905
Paul H. Dernehl..... 1899
Adolph Biersach.....1900 to 1902
Henry E. Eichfeld.....1903
Miss Alice Pluck.....1904
Richard A. Muttkowski.....1906

Janitors—

Carl Thal.....1883 to 1887
Carl Bindrich.....1888 to 1898
Abraham Wolfenden, Jr.....1899 to Nov. 1900
Phillip J. Pier.....Dec. 1900

Chief Engineers—

Clare F. Wilson.....1898 to 1905
Fred. C. Ruck.....1906

Besides these regular employes there have been made "emergency appointments" from time to time as the necessities of the museum have required. Under this class have come various specialists who have worked on and done much to improve its collections.

The institution has been particularly fortunate from the beginning in its choice of taxidermists and modeler, and much of the general attractiveness of its halls has been due to the high degree of their work therein exhibited. This department is now disproportionally strong as compared with the scientific or curatorial force, but it is hoped that this may soon be remedied by additions to the latter.

Respectfully submitted,

HENRY L. WARD,
Director.

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ENLARGED MODEL OF GROUND BEETLE.

(HARPALUS CALIGINOSUS FABR.)

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Department of Invertebrate Zoology.

During the past year the principal work done on the exhibit collections has been in the way of improvement in the method of installation, and in the elaboration of the series representing the more obscure groups of invertebrates. As but little was available for the purchase of material necessary to illustrate these groups, less headway has been made than might have been hoped for, but we are nevertheless tending at present toward a state of balance in the amount of space allotted to the various groups. But little exhibition room remains unoccupied; however, this may be utilized for display of many of these inconspicuous forms, particularly small Crustacea, Flat-worms, Round-worms, models of Protozoa, etc.

A considerable amount of local material was acquired by the museum expedition to northern Wisconsin during June and July, principally insects and plants, but we have not been able to do any sea-coast collecting, where the invertebrate fauna is most abundant and varied.

Progress has been made in the matter of cataloguing the collections on hand, and it is hoped that the end of the year will see us ready to catalogue all new material as fast as it is received.

The following is a detailed report of progress during the year:

MOLLUSKS.

The flat cases, 50 in number, containing the systematic collection of mollusks have been provided with raised bottoms to bring the specimens nearer to the glass covers, where they are better illuminated than previously. Many of these species are

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of small size, and the lessened distance from the eye greatly enhances their illustrative value.

Several small series of shells representing the more obscure families of Gastropods have been purchased from dealers. The greater number of these are representatives of the families Cyclostomidæ, Helicinidæ, Rissoidæ, and Pyramidellidæ, although several other families hitherto not in the collection have also been added. The systematic exhibit of Mollusks is now reasonably complete, and further enlargement in the immediate future seems unnecessary.

Several small special exhibits have been added to the upper sections of the mollusk cases. These include a series of Gastropod shells showing the various shapes assumed by the shell, together with the nomenclature of the different types, and a similar one showing the forms assumed by the aperture in this group.

A series of Hawaiian Achatinellidæ, accompanied by a descriptive label and a series of several transparencies, illustrate the remarkable evolution of this group in the Sandwich Islands. Several smaller series show mimicry among shells, dextral and sinistral whorls, etc.

A fine series of some thirty shells showing the evolution of the genus *Paludina* from the Pliocene of Europe have been purchased. They are arranged in accordance with the views of Neumayr.

A number of additional labels descriptive of families and larger groups have been added to the systematic series which now contains nearly one hundred such labels.

Considerable additions to the collection of mollusks of Wisconsin have been made by donation and by collection on the part of members of the museum staff. Our series of species from distant parts of the state are still very meagre, but are gradually being enlarged. Numerous species from the northern part of the state were secured by the museum expedition during the early summer, and Mr. Ward secured a representative col-

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lection from Washington County later in the season. Representatives of each species from the state are kept in the local exhibit collection, and the larger study series are kept stored in accessible form.

During the year 646 specimens of mollusks have been received.

ARTHROPODS.

The crustacean exhibit remains practically unchanged, except that some of the smaller groups have been arranged and supplied with descriptive labels. While we have a number of the larger and more conspicuous Crustacea, the other groups are very poorly represented and should be added to as soon as possible.

The purchase of some specimens of *Peripatus* from New Zealand has bridged an important gap in the arthropod collection.

To the exhibit of insects there have been added two environmental groups, one illustrating the nesting habits of the large digger-wasp known as the Cicada-killer, and the other showing the nests of the Ant-lion. The material for the former was collected by the curator in Massachusetts and that for the latter in northern Wisconsin.

Several paper nests of Texan wasps have been put on exhibition, as well as a few small insect exhibits of various sorts, but owing to our limited space no attempt has been made to enlarge these exhibits materially.

As soon as more room becomes available it will be possible from our present stored collections to make the beginning of a local exhibit collection of insects similar to the one which we already have to illustrate the mollusks. Such exhibits of insects are necessarily rather extensive to be at all complete, but have considerable educational value, and are much more suitable for public display than vast series of species with which the visitor will never come in contact outside of a museum. We should

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also have a similar but much smaller exhibit of exotic insects to give an idea of the relations of our own insect fauna to that of the world in general.

During the year the study collections of insects have been materially improved. The Diptera and Hymenoptera have all been transferred into smaller and better drawers, the exotic Lepidoptera taking their place in one of the old cases of large drawers. The North American Lepidoptera have been entirely rearranged, many of them identified and the entire series catalogued. In connection with this work Mr. Muttkowski has published a supplement to the list of our local fauna.

Numerous correspondents have aided us materially in the identification of specimens, among whom may be particularly mentioned Dr. H. G. Dyar, Mr. Geo. Grossbeck, Dr. Wm. H. Ashmead, Prof. A. L. Melander, Prof. James Hine, and Mr. H. L. Viereck. The curator has identified specimens for a number of other institutions and correspondents, principally for the Hungarian National Museum, Brooklyn Museum, Museum of Comparative Zoölogy, Philadelphia Academy of Sciences, U. S. Department of Agriculture, Minnesota and Pennsylvania Experiment stations, American Museum of Natural History, and the University of Colorado, as well as for a number of visitors to the museum. He is at present preparing a paper descriptive of a large collection of fossil Hymenoptera, belonging to the collections of the Museum of Comparative Zoölogy, the American Museum of Natural History, and the British Museum.

120 new insect drawers have been purchased to accommodate the increasing size of our collections.

Accessions of insects during the year amount to 2,543 specimens, due almost entirely to collections made by members of the museum. Others were in exchange for identifications, and a few by donation. No insects have been purchased. The largest accession was 1,002 specimens obtained by the museum expedition into northern Wisconsin.

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WORMS, ETC.

During the year a number of specimens were purchased from dealers to fill some of the gaps in the series illustrative of the several phyla included under this head.

Three large models of the common leech showing internal anatomy were also purchased.

A series of eleven water-color sketches of Rotifera make the beginning for an exhibit of the animals belonging to this interesting phylum.

Of the numerous exhibits in this case, the Annelid worms and the Molluscoida are the most complete. To the latter have been added during the year a considerable number of Brachiopods.

Descriptive labels for the phyla and some of the classes have been printed.

ECHINODERMS.

These remain practically the same as last year, except that the level of the floors in the cases have been raised similarly to those in the mollusk exhibit.

COELENTERATES.

A number of descriptive labels have been added to the coelenterate cases, but no additional exhibit specimens have been obtained.

A sawed and a split section of a large brain-coral have been installed to give some idea of the internal structure of the stony corals.

SPONGES.

The sponge collection has not been added to by purchase, although one fine large specimen of a vasiform *Hippospongia* which came as a donation has been put on exhibition.

A printed label descriptive of the phylum has been added.

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PROTOZOANS.

Nothing but a descriptive label has been added to this incomplete exhibit, which consists only of an inextensive series of models of Rhizopods. We hope soon to be able to add more matter in the way of drawings and models to this section.

PUBLICATIONS.

There have been issued during the year from the department of invertebrate zoölogy the following scientific publications, dealing principally with the museum collections or with material sent to us for study:

1. Brues, Charles T. Genera Insectorum, Fam. Phoridæ, Fasc. 44, pp. 21, 2 pls. (Brussels, 1906).

2. Brues, Charles T. Notes and Descriptions of North American Parasitic Hymenoptera, Part 2, Bull. Wisconsin Nat. Hist. Soc., Vol. 4, pp. 143-152 (1906).

3. Brues, Charles T. Fossil Parasitic and Phytophagous Hymenoptera from Florissant, Colorado, Bull. Am. Mus. Nat. Hist., Vol, 29, pp. 491-498 (1906).

4. Brues, Charles T. New Chalcid Flies from Cape Colony, Bull. Wisconsin Nat. Hist. Soc., Vol. 5, pp. 46-53 (1907).

5. Brues, Charles T. Notes and Descriptions of North American Parasitic Hymenoptera, Part 3, Bull. Wisconsin Nat. Hist. Soc., Vol. 5, pp. 54-62 (1907).

6. Same, Part 4, Bull. Wisconsin Nat. Hist. Soc., Vol. 5. pp. 96-111 (1907).

7. Brues, Charles T. The Systematic Affinities of the Dipterous Family Phoridæ, Biological Bulletin, Vol. 12, pp. 349-359 (1907).

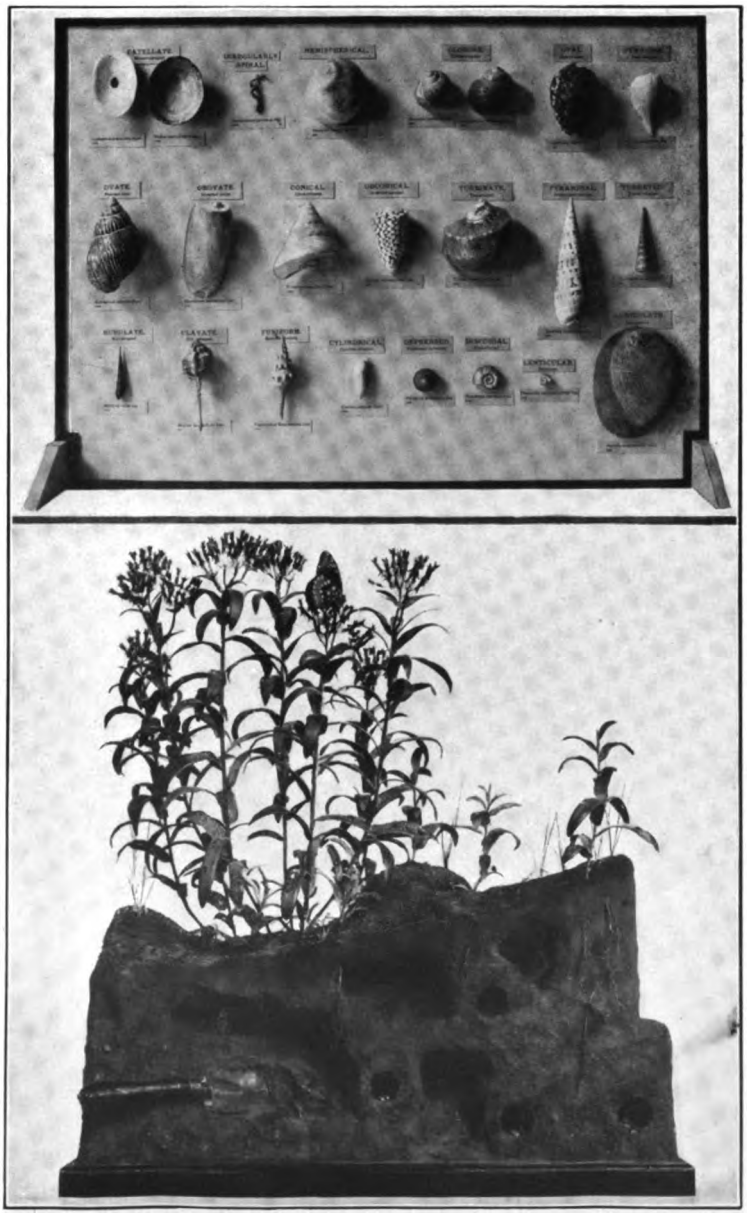
8. Brues, Charles T. Some New Exotic Phoridæ, Ann. Mus. Nat. Hungarici, Vol. 5, pp. 400-413, 1 pl. (1907).

9. Muttkowski, Richard A. Additions to the Lepidopterous Fauna of Milwaukee County, Bull. Wisconsin Nat. Hist. Soc., Vol. 5, pp. 128-133 (1907).

BOTANY.

As before, the curator of invertebrate zoölogy has acted as curator of the botanical collections in the absence of a professional botanist in connection with the museum.

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SERIES OF GASTROPOD SHELLS,
SHOWING TYPICAL FORMS.

ENVIRONMENTAL GROUP.
NESTS OF LARGER DIGGER WASP.
(SPHECIUS SPECIOSUS DRURY.)

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The remounting of the North American plants has been entirely completed, and the collection is now arranged in systematic order, and is accessible to persons specially interested.

The European flora still remains to be dealt with and a start is being made toward remounting these on the regulation herbarium sheets, after which the nomenclature can be revised and the collection arranged in easily accessible form.

A considerable number of specimens of plants from Wisconsin have been collected by members of the museum, nearly five hundred sheets in all, and a small number received from other persons.

The entire exhibit collection of mushrooms, filling three cases, has been overhauled, some of the specimens remounted, and the shelves and backgrounds of the cases painted in the light buff color which has been adopted in most of the museum cases.

An exhibit illustrating the dispersal of plants has been installed. It contains examples showing the various ways by which plants are disseminated. Typical plants whose dispersal is effected by different means, such as water, wind, agency of animals, growth of offshoots, etc., are shown, together with descriptive labels for the several categories.

The case containing wild flowers has been kept filled during the season, each species exhibited being provided with a printed label containing both common and scientific name and a few words regarding its habitat.

C. T. BRUES,
Curator of Invertebrate Zoology.

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Report of the Curator of Books.

At the close of the year it becomes my duty to prepare a condensed report of what has been accomplished in the museum's reference library. Carrying out the suggestion made in the preceding report for a more extensive and systematic correspondence with local and foreign societies and institutions for the purpose of increasing our library, I am fortunate to say that my efforts in that direction have not been in vain, though much more could have been accomplished had it not been for the analytical work, which requires constant attention and which ought not to be neglected for a long period of time. I have no doubt that by perseverent work during the next year we will be able to add a number of those societies and museums to our exchange list which so far could not be secured.

Since the last report was submitted, much has been done in the analytical work. All the bulletins and reports of the U. S. Fish Commission, the reports of the U. S. Geological Survey of the Territories, the U. S. Geological and Geographical Survey reports, the Iowa Geological Survey Reports, the Botanical Gazette, the Minnesota Botanical Studies, and quite a number of reports of smaller societies have been analyzed. We have received and classified during the year 1,652 volumes and pamphlets, 72 more than during the preceding year, which must be credited to the correspondence that was established with other societies and museums.

We have written 2,798 author cards, 5,687 subject cards and 425 guide cards; there were also classified and interpolated in the card catalogue about 1,000 cards accompanying the work "Die Natürlichen Pflanzenfamilien," by Engler and Prantl. To properly carry out the foregoing enumerated work it was

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necessary to direct 214 letters and some postals to the various societies and institutions.

In order to gain space for the many cards awaiting interpolation in the regular card catalogue, we had to exchange our card cabinet for one double the size of the former, the present one containing 60 drawers.

The space allotted to us by the new double book stack, which by your kind action was added to our library furniture in the beginning of 1906, will soon be taken up, and additional shelf room will be necessary if the library continues to increase at the same rate the coming year as it did during the preceding one.

The general condition of the library has been somewhat improved by the binding of a small number of books, although these were so few, indeed, that this fact hardly deserves any mention. There are periodicals of 1904 which have not yet been bound, there are very valuable memoirs, and a large number of other frequently used publications that ought to be bound very soon.

Earnest efforts have continually been made to complete the sets of publications of the various local and foreign societies, but years may elapse before this can be accomplished; in fact, in many cases it will prove fruitless work trying to complete the broken sets, as these older numbers of society publications are probably out of print.

It affords me pleasure to report an increase of visitors to our library who came to us for the purpose of receiving information on such natural history subjects as interested them. Most of them inquired for publications on birds, which was probably due to the introduction of bird studies in the public schools. Others inquired for botanical works, and some came to read about the economic geology and palaeontology of Wisconsin. We could accommodate all of them and our assistance was appreciated. Much more information could have been given to visitors if all the publications in our library were cata-

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logued, but so far only the publications of the principal American societies and museums have been done. None of the foreign societies and none of the periodicals could be given any attention with the exception of the "Botanical Gazette," which has been catalogued.

The expenditure for library purposes during the year were $304.75; i. e., $75.00 for furniture and $229.74 for new books, for binding and catalogue cards.

I am under obligations to Dr. S. Graenicher of this city and to Miss I. R. Hood of the library of the American Museum of Natural History of New York City for their assistance rendered to the library of this museum.

All of which is respectfully submitted by

CARL THAL,
Curator of Books.

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ENVIRONMENTAL GROUP.

SAND PITS OF THE ANT LION.

(MYRMELEON.)



LARGE VASIFORM SPONGE.

(HIPPOSPONGIA GALEA LEND.)

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APPENDIX

Additions to the Museum and its Library.

Donors are citizens of Milwaukee unless otherwise noted, and where no localities to specimens are given, the State of Wisconsin is to be understood.

ZOOLOGY.

Donations.

Ackmann, Miss Viola,
1 Yellow-bellied Sapsucker.

Anderson, Miss Janet and Jack Dillman,
1 Sora.

Andrae, Miss Clara,
1 Spider.

Anger, Allen,
1 Ovenbird.

Arbuckle, Mrs. Wm.,
1 Muscallonge.

Atkins, Miss Lillian,
1 Bluebird.

Auer, Mrs. Louis,
1 Abbott's Sphinx Moth.

Barta, Jr., Jos. K.,
1 Homing Pigeon, "Lady Elgin,"
1 White Fantail Pigeon, "Jushia."

Barth, Dr. Geo. P.,
14 Insects, Acroceridæ.

Becherer, Walter,
1 Ovenbird.

Bengough, Wm., Kiamesha, N. Y.,
3 Insects, Kiamesha, N. Y.

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Bentine, Wm. J.,
1 Moorehead Tumbler Pigeon.

Bertschy, Abert,
1 Spider.

Betts, Paul,
1 Connecticut Warbler.

Biagi, Frank,
1 Tarantula, Central America.

Bishopp, F. C., and C. R. Jones, Dallas, Texas,
3 Texan Paper Wasp Nests, Texas.

Blau, Eddie,
1 Canadian Warbler.

Bluck, Robert,
1 Redstart.

Board of Park Commissioners,
2 California Sea Lions, Captivity.

Boehme, Charles,
1 Hermit Thrush.

Boerner, Richard Henry,
1 Spider.

Bolt, W. C.,
1 Red Dragon Pigeon.

Bonn, Eddie,
1 Rose-breasted Grosbeak.

Borkenhagen, Miss Edna,
1 Yellow-bellied Sapsucker.

Bossert, Edwin,
1 Weasel.

Brah, Bernard,
1 Dragon Fly.

Brandler, Charles,
1 Flicker,
6 Meadow Larks,
2 Red-breasted Mergansers,
1 Yellow Legs.

Breitkreutz, Otto,
1 Night Heron.

Brocker, Fanny,
1 Sora.

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Brown, Abe,
1 Blue Jay,
5 Fox Squirrels,
1 Gray Rabbit,
9 Gray Squirrels,
1 Screech Owl.

Brown, Mrs. A. D.,
1 Tiger Salamander.

Brown, Simon,
1 Ovenbird.

Brues, Charles T.,
28 Bees, representing 15 species, U. S.
77 Insects, Various localities.

Buckley, Miss B. E.,
1 Wilson's Warbler.

Bueckert, Charles,
1 Ovenbird.

Buehmann, Miss Anna,
1 Black-throated Green Warbler.

Bundy, Mrs. M. G.,
1 Frog,
3 Snails,
2 Tadpoles,
1 Tiger Salamander,
2 Toads,
4 Turtles.

Bunta, Edward,
1 Black-throated Blue Warbler,
2 Canadian Warblers,
2 Ovenbirds,
1 Redstart,
1 Yellow-bellied Flycatcher.

Canar, Miss Ruth, and Miss Clara Jullmann,
1 Golden-crested Kinglet.

Carlson, Stanley,
1 Scarlet Tanager.

Catalano & Damore,
1 Snake, Cieba, Honduras.

Chandler, G. A., and Allan H. Hardy,
13 Tadpoles,
1 Tiger Salamander.

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Chawkoski, Joseph,
1 Bronzed Grackle.
Church, L. E.,
1 Virginia Opossum, Bucyrus, O.
Clarke, Miss S. Belle,
1 Nashville Warbler.
Cockerell, T. D. A., Boulder, Col.,
2 Insects, Colorado and Vera Cruz.
Coleman, Mrs. Mary E.,
1 Sponge, Tarpon Springs, Fla.
Daehn, Elmer,
1 Myrtle Warbler,
1 Palm Warbler.
Davis, Miss Lolla,
1 Wall Lizard.
Delno, Bert,
1 Water Thrush.
Desmond, Robert,
1 Chestnut-sided Warbler.
Diemar, Ralph,
1 Ovenbird.
Dillmann, Jack,
1 Black-throated Blue Warbler.
Doyle, Chauncey,
1 Hermit Thrush.
Drawantz, Miss Erna,
1 Yellow-bellied Sapsucker.
Dreyfuss, Julius, Hales Corners, Wis.,
1 Chicken foot with 5 toes.
Eder, Raymond,
1 White-throated Sparrow.
Edwards, Rev. Frederick,
1 Hermit Thrush,
1 Winter Wren.
Edwards' Animal Exhibition,
1 Toucan, Captivity.
Eisenberg, Miss Mary,
1 Yellow-bellied Sapsucker.
Ellis, Mrs. Bertha,
2 Yellow Inside Tumbler Pigeons.

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Erdman, Herbert,
1 Blackburnian Warbler,
Ertz, Bruno,
1 Leaf Insect, Borneo?
Essmann, Harry,
1 Ovenbird,
1 Virginia Rail.
Evans, Rudolph,
1 Gray-cheeked Thrush.
Evenson, Signe,
1 Canadian Warbler.
Feldhack, Lester,
1 Towhee.
Fernekes, Valentine,
1 Fox Sparrow,
35 Insects.
Fiebrantz, A. M.,
1 English Trumpeter Pigeon,
1 Yellow Brunswick Trumpeter Pigeon.
Finney, Eugene,
1 Black-throated Green Warbler.
Forsbeck, Dr. Filip A.,
1 Saw-whet Owl.
Fowler, Miss Lotta B.,
1 Yellow Warbler.
Freede, Milton, Hales Corners, Wis.,
1 Weasel.
Freuler, Miss Loraine,
1 Yellow-bellied Sapsucker.
Friend, J. E.,
1 Bull-finch, imported.
Gardner, Miss E. J.,
1 Gray-cheeked Thrush,
1 Maryland Yellow Throat,
1 Wilson's Thrush.
Gengler, Lorence,
1 Great Blue Heron.
Geske, Miss Margaret E.,
1 Canadian Warbler.
Gibson, Miss Estella,
1 House Wren.

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Gifford, Mrs. W. J.,
1 Yellow-headed Amazon Parrot, Mexico?
Graenicher, Miss Sylva,
1 Garter Snake,
1 Tiger Salamander.
Greuling, Robert,
1 Gray-cheeked Thrush.
Griffiths, Kenneth,
1 Sora.
Grobben Bros.,
Food for live animals.
Hackendahl Drug Co.,
1 Bull Frog.
Hacker, John,
1 Ruby-throated Hummingbird.
Haensler, Miss Catherine,
1 Canadian Warbler.
Hall, Bert, Wauwatosa, Wis.,
1 Tiger Salamander.
Hamann, Prof. Emil,
1 Virginia Rail.
Hansen, Christ,
1 American Redstart,
1 Brown Creeper,
1 Red Bat.
Harmon, Fritz,
1 Chestnut-sided Warbler.
Haubner, Joseph,
1 embryonic Pigeon, 2 heads.
Hawn, Jack,
2 Ovenbirds.
Heim, John F.,
1 Angora Guinea Pig,
1 Parrakeet, Africa.
2 Parrots, Captivity.
Heller, Leo,
1 Red-eyed Vireo.
Henderson, Edwin,
1 Wall Lizard.
Herrmann, Miss Mariechen,
1 Gray-cheeked Thrush.

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Hill, Earl,
1 Catbird.
Hill, Leland,
1 Hermit Thrush.
Hinrichs, Frederick,
2 Canadian Warblers,
1 Ovenbird.
Hobergritz, Samuel,
1 Garter Snake.
Hoffmann, Walter,
1 Ovenbird.
Hughson, Charles E.,
1 Black-throated Blue Warbler.
Jaeger, Valerius,
1 Cedarbird.
Jaffe, Samuel,
1 Magnolia Warbler.
Janke, Irving,
1 Golden-crowned Kinglet.
Johnson, Archie,
1 Black-throated Blue Warbler.
Jones, Miss Gertrude,
1 Ovenbird.
Jones, John E.,
1 Meadow Lark.
Jones, Russel,
1 Ovenbird.
Just, Julius,
1 Canadian Warbler.
Kaiser, Arthur,
1 Wood Thrush.
Kasperson, Clarence,
1 Yellow-bellied Sapsucker.
Keehn, Frank,
1 Canadian Warbler,
1 Golden-crowned Kinglet,
1 Magnolia Warbler,
2 Ovenbirds,
1 Wilson's Warbler.
Kilian, Miss Laura,
1 Ovenbird.

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Knapp, Joyce,
1 Ovenbird.

Koch, Oscar,
1 Tennessee Warbler.

Koch, Walter,
1 Chimney Swift,
2 Ovenbirds.

Kopp, George,
1 Least Bittern,
1 Ovenbird.

Krassin, Arthur,
1 Butterfly.

Kriz, Miss Julia,
1 Towhee.

Krueger, Arthur,
1 Bay-breasted Warbler.

Krushke, Fred.,
1 Garter Snake.

Kuehneisen, George,
1 Saw-whet Owl.

Kuntz, Clayton,
1 Screech Owl.

Kurrasch, Adolph,
1 Catbird.

Lakin, Miss May M.,
1 Black-throated Green Warbler,
1 Ovenbird.

Lamoreux, Miss Marie,
1 Black and White Warbler.

Leidersdorf, B.,
10 Bumble and Flower Beetles,
2 Capercally, "Cock of the Woods," Germany.
1 Corn Crake.

Liebau, Harry,
1 Walking Stick Insect.

Lindel, Julius,
1 Blackburnian Warbler,
1 Black and White Warbler.

Lindsay, Mrs. E. J.,
1 Promethean Moth.

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Lloyd, Eddie Allen,
1 Yellow-bellied Sapsucker.
Locke, Miss Blanche,
1 Bay-breasted Warbler,
1 Wilson's Warbler.
Loewe, Miss Clara A.,
1 Coral, Pacific Ocean?
Lukens, Miss Helen,
1 Spider.
Lusk, Miss Grace A.,
1 Ovenbird.
Mach, Eddie,
1 Olive-backed Thrush,
1 Yellow-bellied Sapsucker.
MacNeill, E. H.,
1 Gray-cheeked Thrush.
Madden, Edward,
1 Ovenbird.
Maire, Miss Ruth,
1 Cedarbird.
Major, Miss Ruth,
1 Chimney Swift,
1 Ruby-crowned Kinglet,
1 Wilson's Warbler.
Martin, Raymond,
1 Yellow-bellied Sapsucker.
Martin, Miss Valley,
1 Maryland Yellow Throat.
McCabe, Miss Kate C.,
3 Canadian Warblers,
1 Red-eyed Vireo,
1 Yellow-bellied Flycatcher.
McClintock, Alan,
1 Magnolia Warbler.
McIntyre, Edward,
4 Cast skins of Cicada, Circleville, O.
McLenegan, Harry,
1 Brown Thrasher.
McRae, Alex., Rhinelander, Wis.,
1 Virginia Deer, buck.

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Meterie, Charlie,
1 Ovenbird.
Meyer, Miss M. D.,
1 Catbird,
1 Ovenbird.
Milbreth, Alfred,
1 Olive-backed Thrush.
Miller, Joseph,
1 Painted Turtle.
Miller, Paul,
1 Tiger Salamander.
Mixer, Miss Beatrice,
1 Night Hawk.
Moeder, Louis,
1 Downy Woodpecker,
1 Screech Owl.
Mondschein, Olthmar,
1 Chestnut-sided Warbler.
Moon, Mrs. John L.,
1 Orb-weaving Spider.
Morawetz Co., The,
2 Skins of Zebra, **Africa.**
Mortimer, Miss Elizabeth,
1 Yellow-bellied Sapsucker.
Mueller, Miss Carla,
1 Snapping Turtle.
Murphy, Wolford,
1 Ruby-crowned Kinglet.
Murray, Milton,
1 Canadian Warbler.
Nelson, Arthur,
1 Robin.
Nelson, Miss Letitia,
1 Yellow-bellied Sapsucker.
Nemetz, Frank,
1 Maryland Yellow Throat,
1 Painted Tortoise.
Oelke, Frank,
1 Barred Owl.
O'Leary, Miss Vera,
1 Canadian Warbler.

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Osthoff, Herman, Elkhart Lake, Wis.,
1 African Owl Pigeon,
1 Silver English Owl Pigeon.

Patterson, Capt. F. M.,
1 Alligator, Florida.

Peckham, Dr. Geo. W.,
1 Trap-door Spider's Nest, So. California.

Pier, Phillip J.,
1 Ovenbird.

Pollworth, Aug. W.,
1 Abyssinian Cavy, England.
1 Peruvian White Cavy, "
2 Smooth Black English Cavies, "

Ponbos, Carl,
1 Ovenbird,
1 Parula Warbler,
1 Towhee.

Pretzel, Miss Lillian,
1 Black-throated Green Warbler.

Ransom, Mrs. P. B., Chicago,
1 Green Frog,
3 Insects.

Rastall, Miss Anna G.,
1 Blackburnian Warbler,
1 Chimney Swift,
1 Magnolia Warbler,
1 Wilson's Warbler,
1 Yellow-bellied Flycatcher.

Rau, L.,
1 Ovenbird.

Reindl, Hugo,
1 Least Flycatcher.

Reindl, John,
1 Olive-backed Thrush.

Reinhardt, G. L.,
3 Storer's Snakes.

Reinisch, Miss Elizabeth,
1 Ovenbird.

Rice, William,
1 Yellow Warbler.

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Rindskopf, Elias,
1 Orb-weaving Spider.

Roe, Thomas,
1 Red Bat.

Rohde, Paul C.,
1 Red Squirrel.

Rohde, Walter C.,
1 American Goshawk.

Rohwer, S. A., Boulder, Col.,
17 Insects, Boulder, Col.

Rost, Martin,
1 Cecropia Moth and Cocoon.

Rowe, Miss Phillipa,
1 Maryland Yellow Throat,
1 Ovenbird,

Rowe, Garner,
1 Black and White Warbler,
1 Bronzed Grackle,
1 Gray-cheeked Thrush.

Ruddle, Bart. J.,
1 Nine-banded Armadillo, Mexico?

Sargent, Eugene,
1 American Long-eared Owl.

Sayle, Dr. R. G.,
1 Double-crested Cormorant.

Schaab, Joseph,
6 Leopard Frogs,
1 Walking Stick insect.

Schaffer, Howard,
1 Brown Creeper,
1 Ovenbird.

Scheinert, Miss A. M.,
1 Red-breasted Nuthatch.

Schluenz, Dr. R. A., Abrams, Wis.,
2 Evening Grosbeaks.

Schoenebeck, A. J., Kelley Brook, Wis.,
1 Goshawk,
2 New York Weasels,
6 Ruffed Grouse, young.

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Schoenebeck, Carl, Lena, Wis.,
1 Red-tailed Hawk,
1 Snapping Turtle.

Scholl, Mrs. M. L., Chippewa Falls, Wis.,
1 Sharp-shinned Hawk.

Schubert, Gladys,
1 Redstart.

Seltzer, Miss Edna K.,
1 Alligator.

Seventh District School,
1 Maryland Yellow Throat,
2 Ovenbirds,
1 White-throated Sparrow.

Shrosbree, Mrs. Grace Webb, Edgewater, Ill.,
1 American Toad,
1 Green Frog,
2 Insects,
1 Wall-eyed Pike.

Shrosbree, Mrs. George,
92 Mollusks.

Shrosbree, George,
2 Insects,
2 Red-headed Woodpeckers,
1 Slate-colored Junco.

Singer, Anthony,
1 Sora.

Skinner, Mrs. J. W.,
3 Invertebrates, Various localities.

Smith, Walton,
1 Luna Moth.

Springer, Mrs. Kate M., Ravenswood, Ill.,
1 Large-mouthed Black Bass.

Stearns, Miss Eva,
1 Flicker.

Stearns, George,
1 Screech Owl.

Steinmetz, Walter,
1 Bonaparte's Gull.

Stella, Vincent,
1 Ovenbird.

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Stroebel, Willie,
1 Brown Creeper.
Subr, Alfred,
1 Polyphemus Moth.
Sullivan, Murray,
1 Ovenbird.
Sweemer, William,
1 Winter Wren.
Tallman, T. W.,
1 Beetle.
Taube, Miss Edna,
1 Painted Mud Turtle.
Tellier, Arthur,
1 Hermit Thrush.
Tetzner, Arthur,
1 Wilson's Thrush.
Thompson, Prof. M. T., Worcester, Mass.,
334 Parasitic Hymenoptera from gall insects, Worcester, Mass.
Tobasnick, Abraham,
1 Hermit Thrush.
Todd, Samuel,
1 Blue Jay.
Torney, L. J., Manitowoc, Wis.,
1 Group Spider Nests,
4 Insects.
Traiton, Harry,
1 Yellow Warbler.
Tucker, E. S., Lawrence, Kan.,
14 Hymenoptera, Kansas and Colorado.
355 Insects, " "
Valker, Earl,
1 Yellow-bellied Sapsucker.
Van Altena, Miss Florence M.,
1 Cerulean Warbler,
1 Screech Owl,
1 Sora.
Van Altena, Wm. P.,
1 Sora.
Velguth, Waldemar,
1 Canadian Warbler,
1 Red-eyed Vireo.

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Wahl, Robert,
1 Human Skull, So. Col. or No. N. Mex.?
1 Red Squirrel,
1 Striped Gopher,
1 Wasp's Nest.

Ward, Henry L.,
4 Fresh Water Clams,
5 Frogs,
1 Guinea Hen,
179 Insects,
61 Mollusks,
1 Water Snake.

Ward, Miss Marian E.,
6 Insects.

Ward, Henry S.,
1 Caterpillar Searcher,
1 Least Flycatcher,
1 Tree Toad,
1 Unio.

Wehlitz, Erwin,
1 Water Thrush.

Wehmhoff, E. J., Burlington, Wis.,
1 Weasel.

Wertenberg, Percy,
1 Ruby-throated Hummingbird.

Whitehill, Jeffrey,
1 Rose-breasted Grosbeak.

Wickert, John,
1 Cedarbird.

Williams, Eddie,
1 Ovenbird,
1 Redstart.

Windfelder, E. W.,
1 Alligator, Florida.

Winkel, William,
1 Hermit Thrush.

Wright, W. W.,
1 Luna Moth.

Wyler, Miss Anna,
1 Ovenbird.

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Young, Dr. W. C.,
2 Mallards.
Zernia, Raymond,
1 Ovenbird.

Museum Expeditions.

77 Birds,
53 Eggs,
2,196 Insects,
1 Lot Crustacea,
11 Mammals,
86 Mollusks.

By Exchange.

350 Insects.

By Purchase.

366 Bird skins,
3 Mammal skins,
396 Mollusks,
1 Set development of Paludina after Neumayr,
34 Worms and Brachiopods.

BOTANY.

Donations.

Ertz, Bruno,
7 Botanical Specimens.
Falconer, Robert,
1 Sea Bean, Southern Coast.
Glas, Edna,
1 Mushroom.
Halsey, P. L.,
5 Botanical Specimens.
Harper, Miss M. M.,
1 Puffball.
Hill, E. J., Chicago, Ill.,
2 Quercus palustris, swamp oak, Thornton, Ill.
Hirsch, Herman,
6 Mushrooms.
Loewe, Miss Clara A.,
2 Botanical Specimens.

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Rohde, Paul C.,
1 Shelf Fungus.
Sherman, Dr. Lewis,
3 Fungi.
Shrosbree, George,
1 Broom Corn.
Sister Josepha,
1 Euphorbia marginata.
Skinner, Mrs. J. W.,
2 Nuts, Hawaii.
Ward, Henry L.,
82 Botanical Specimens,
5 Twigs of oak infested by Elaphidon sp.
Ward, Miss Alice G.,
7 Plants.
Wisconsin Mycological Society,
1 Mushroom.

Museum Expeditions.

175 Plants.

By Exchange.

37 Botanical Specimens, Various localities.
48 Fibers, " "

PALEONTOLOGY.

Donations.

Meyer, Rev. F. W. C.,
1 Orthoceras, Cincinnati, O.
Mitchell, A. S.,
5 Cephalopods,
1 Rib of Mastodon, Medaryville, Ind.

Museum Expeditions.

1 Fossil.

By Purchase.

1 Conularia,
1 Crinoid,
1 Lepidodendron,
20 Pentremites,
1 Siphonocrinus.

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MINERALOGY AND GEOLOGY.

Donations.

Bartlett, Dr. E. W.,
1 Granite, polished.

Enne, Peter,
1 Sheet Copper, Calumet, Mich.

Hellberg, G. A.,
1 Silicious deposit,
1 Silicious sinter.

Knopf, Eddie,
1 Marcasite.

Loewe, Miss Clara A.,
40 Minerals, U. S.

Matteson, E. C.,
1 Stalactitic Slag.

Skinner, Mrs. J. W.,
8 Minerals.

Smith, Henry,
1 Free Gold on quartz, Santa Fe Co., N. M.

Teller, E. E.,
1 Garnet in Niagara limestone.

True, E. C.,
1 Galena,
1 Lead Ore.

Woolcock, C. G.,
4 Lead and Zinc specimens.

Museum Expeditions.

10 Rocks.

By Purchase.

1 Obsidian, Dressman, Yellowstone Park.

ARCHEOLOGY.

Donations.

Ellsworth, W. H.,
1 Grooved Axe.

Friese, Mrs. F. W.,
1 Lot human bones and charcoal from mounds, No. Dak.

King, James P., Hilbert, Wis.,
2 Flint Points,
1 Float Copper.

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Skinner, Mrs. J. W.,
13 Archeological specimens.
Vonier, Louis,
1 Grooved Axe.
Zuehlke, Walter,
2 Flint Arrows,
1 Flint Drill,
1 Flint Spear.

By Exchange.

204 Archeological specimens, Dist. of Col. & Potomac Val.
4 Chipped Flints, Indiana.

By Purchase.

33 Flint Scrapers, two Caches, Fulda, Tex.
1 Quartzite Spear,
1 Stone Mortar.

ETHNOLOGY.

Donations.

Brandler, Charles,
1 Carved Wooden Spoon, Somaliland, Africa.
Dawe, Miss Ella M.,
1 Piece of grate and rib of Old Ironsides.
Forrest, F. H.,
1 Cigar Case, Alaska.
Habhegger, Otto J.,
1 Photo of Mathias Stein (gunsmith).
Hatley, Mrs. A.,
1 Wooden Box, Norway.
Mitchell, A. S.,
1 Brassara, Zacatacas, Mexico.
Rindskopf, Elias,
2 Old Milwaukee Newspapers.
Skinner, Mrs. J. W.,
11 Ethnological specimens.
Wagner, Miss Clara,
1 Model of Ship,
1 Old style sausage filler.
Watkins, Mrs. H. A.,
61 Civil War specimens, property of the late Adjt. Wm. West Watkins, 1st Wis. Inf.

By Exchange.

3 Pieces of Pueblo Pottery, New Mexico.

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By Purchase.

1 Birch Bark Basket,
1 Catlinite Pipe,
2 Grave Boxes,
8 Photos of Ojibwa Indians,
45 Specimens from Winnebago, Six Nations and Sioux Indians.

NUMISMATICS.

Donations.

Bierman, C. F.,
1 Two and a half Centesimas, 1904, Republica de Panama.

Brand, Ervin, Chicago, Ill.,
1 Half Mark, 1905, Germany.

Fiedler, Harry,
1 Coin, China.

Horlick, Arnold,
1 One Cent, 1907, U. S.

Pier, Phillip J.,
1 One Pfennig, 1887, Germany.

Sherr, David,
1 One Pfennig, 1902, Germany.
2 One Cent, 1878, Netherlands.

Ward, Henry L.,
1 One Cent, 1906, U. S.

By Purchase.

1 Fifty Cents, 1834, U. S.

NUNNEMACHER COLLECTION.

By Purchase.

1 Ivory Screen, Italy.
1 Double-barreled Rifle,
2 Flint-lock Guns,
12 Pistols,
1 Porcelaine Plate, Copenhagen.
1 Porcelaine Parrakeet, Royal Saxon.
1 Powder Flask, Germany.
65 Specimens of Chinese dress and ornaments from Lolo, Thibet and Hangschow, China.

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